

2. Amendment/Modification No. 0004	3. Effective Date 2002OCT21	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By Code W56HZV TACOM AMSTA-LC-CHBB JAMES VICTOR (586)574-7924 WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: VICTORJ@TACOM.ARMY.MIL	7. Administered By (If other than Item 6) Code
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8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)	<input checked="" type="checkbox"/> SCD <input type="checkbox"/> PAS <input type="checkbox"/> ADP PT	9A. Amendment Of Solicitation No. DAAE07-02-R-S193 9B. Dated (See Item 11) 2002AUG15 10A. Modification Of Contract/Order No. 10B. Dated (See Item 13)
Code	Facility Code	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
 (a) By completing items 8 and 15, and returning 2 signed copies of the amendments; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting And Appropriation Data (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS
It Modifies The Contract/Order No. As Described In Item 14.

<input type="checkbox"/>	A. This Change Order is Issued Pursuant To: The Contract/Order No. In Item 10A.	The Changes Set Forth In Item 14 Are Made In
<input type="checkbox"/>	B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).	
<input type="checkbox"/>	C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of:	
<input type="checkbox"/>	D. Other (Specify type of modification and authority)	

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the Issuing Office.

14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE SECOND PAGE FOR DESCRIPTION

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name And Title Of Signer (Type or print)	16A. Name And Title Of Contracting Officer (Type or print)
15B. Contractor/Offeror _____ (Signature of person authorized to sign)	15C. Date Signed
	16B. United States Of America By _____ /SIGNED/ (Signature of Contracting Officer)
	16C. Date Signed

Name of Offeror or Contractor:

SECTION A - SUPPLEMENTAL INFORMATION

1. The purpose of Amendment 0004 is to make the following changes:

- a. Amendment 0003, Narrative A004, Para 1.e.: The reference to "Para C.11" is incorrect. The correct reference is "Para C.2.11."
- b. Section C, Para C.1.5: Change the paragraph text from "The FMTV TDP, Attachment 2, is converted to Pro/ENGINEER 3D Solid Models. Attachment 39 contains the currently available 3D Solid Models. The Contractor shall submit modeling and simulation data of their changes to the M1079A1 without winch, M1085A1 without winch, XM1087A1 without winch, M1088A1 with winch, M1089A1 and M1090A1 with winch 90 DAC IAW CDRL A001, DI-SESS-81000B. The Contractor shall furnish 3D Solid Models M1078A1, M1083A1 and M1084A1 vehicles within 240 DAC, IAW CDRL A001, DI-SESS-81000B. Contractor shall furnish 3D Solid Models M1085A1, M1082, M1095 vehicles within 300 DAC award or receipt of the Government provided 3D Solid Models, whichever is later, IAW CDRL A001, DI-SESS-81000B. The Contractor shall have computer software and hardware necessary to use/manipulate/incorporate changes to the 3D Solid Model. All Contractor 3D Solid Models shall be submitted to the Government in Pro/ENGINEER format IAW Section C.2.1.1.1.4 of this contract."

to read "The FMTV TDP, Attachment 2, is converted to Pro/Engineer 3D Solid Models. Attachment 39 contains the currently available 3D Solid Models. The Contractor shall provide 3D PRO/E solid models of the vehicles M1078A1 and M1083A1 after updating with the Contractor proposed changes within 240DAC, IAW CDRL A001, DI-SESS-81000B. The Contractor shall furnish 3D PRO/Engineer solid models of the remaining FMTV A1 CR variants after updating with Contractor proposed changes within 300 DAC award or 300 days after receipt of the Government provided 3D solid models, whichever is later, IAW CDRL A001, DI-SESS-81000B. The Contractor is not responsible for modeling components missing from the Government provided 3D solid model, unless that item has been impacted by a Contractor initiated change. It will be the Contractor's responsibility to integrate periodic Government provided updates for revised/additional components into the model. The Contractor shall submit modeling and simulation data for the M1079A1 without winch, M1085A1 without winch, XM1087A1 without winch and M1095A1 with winch 90 DAC or 90 days after receipt of Government baseline model data sheets, whichever is later, IAW CDRL A089, DI-SESS-81000B." This change is followed by a quadruple asterisk.

- c. Section C, Para C.2.4.6:
- (1) Restructure the paragraph into "C.2.4.6 Hazardous Materials." and "C.2.4.6.1 Unless written authorization is ..." This change is followed by a quadruple asterisk.
 - (2) Add "C.2.4.6.2 Government TDP. The Contractor shall review the Government-furnished Technical Data Package and shall identify any uses of the prohibited materials identified in C.2.4.6.1 in writing to the Procuring Contracting Officer. This information will be included with CDRL A012 submission requirements. The Contractor's written notification shall identify the part/drawing affected, the prohibited substance, shall recommend alternative environmentally-friendly materials, and shall furnish engineering documentation to substantiate any performance variation between the item made of the prohibited material and the item made with the alternative material. Within 15 days of receipt of the PCO's determination letter, the Contractor shall submit an Engineering Change Proposal to replace the item made of the prohibited material with that identified in the PCO's determination letter." This change is followed by a quadruple asterisk.
- d. Section C, Para C.3.4.9: Change the text "The Contractor will conduct a quarterly reconciliation of the PMR and LSA/LMI database and update the provisioning as required by WD and provide the following deliverables." to read "The Contractor will update the provisioning as required by WD and provide the following deliverables." This change is followed by a quadruple asterisk.
- e. Section J, Exhibit A,
- (1) CDRL A001. Change the remarks in Block 16.
 - (2) CDRL A016, Change the contract references in Block 5, change the Distribution in Block 14, and change the remarks in Block 16.
 - (3) CDRL A018, Change Block 12 from "60 DAC" to read "90 DAC."

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- (4) CDRL A085, Transfer to a separate page, add reference to paragraph C.3.12 to Block 5, and revise the remarks in Block 16.
- (5) Add CDRL A089, Modeling and Simulation Data.
- (6) Change the exhibit date to 08 Oct 02.

g. Section J, Attachment 1:

- (1) In the first sentence of paragraph 3.2.1.9, change "... the procedure cited in SAE J366." to read "... the procedure cited in paragraph 4.7.8."
- (2) Change Para 3.4.14.5.2 Change the text from "Master Switch Control box. A master switch control box shall have a separate through connection to the vehicle power distribution panel to allow a special tool control cable to be installed for maintenance tasks. This master switch control box shall also allow to turn the master power on; turn the engine on (ignition); and turn the engine off (shutdown).

to read "External Ignition Control (EIC. The vehicle shall be equipped with an external ignition control (EIC) that shall allow the operator/maintainer to 1) turn the ignition on and off and 2) start and stop the engine, while the cab is tilted forward and without requiring the operator/maintainer to enter the cab. The EIC shall not override the master electrical power switch.
- (3) In the second sentence of paragraph 4.7.8 change "... shall be 2/3 rated payload." to read "... shall be 2/3 rated payload and engine exhaust brake shall not be engaged during test."
- (4) In the second sentence of paragraph 4.7.70 change "... master electric power switch and master power switch control box shall be ..." to read "... master electric power switch and external ignition control shall be ..."
- (5) In paragraph C.3.1.5.1 delete "RESERVED." and substitute "Heater. The van body shall be provided with a heater conforming to C.3.1.5.3. Vehicle 24 VDC shall be supplied for the operation of the heater's fuel pump."
- (6) In paragraph C.3.1.5.2 delete "RESERVED." and substitute "Air Conditioner. The van shall be equipped with provisions to accept an air conditioning system conforming to C.3.1.5.3. The air conditioning system shall be operable independent of the vehicle engine."
- (7) Paragraph C.3.1.5.3: Add the following as the second sentence, "An air conditioning kit is allowable to meet this requirement."
- (8) In paragraph H. change the first sentence " The van shall be provided with an air conditioning system conforming to H.3.3.1." to read "The van shall be equipped with provisions to accept an air conditioning system conforming to H.3.3.1."
- (9) Paragraph H.3.3.1: Add the following as the last sentence, "An air conditioning kit is allowable to meet this requirement."
- (10) In the first sentence of paragraph K.3.6.1 change "... a flashing amber light ..." to read "... a flashing green light ..."
- (11) Change the date of the attachment to: 11 Oct 02.

- h. Section L, Para L.5.3.1: Change the paragraph text from "The Offeror is required to provide with their proposal, solid models of their design changes for only the M1078A1 with winch and M1083A1 with winch. All other modeling and simulation data of the proposed M1078A1 with winch, M1079A1 without winch, M1083A1 with winch, M1085A1 without winch, M1087A1 without winch, M1088A1 with winch, and M1089A1 with winch and M1090A1 with winch vehicles shall be submitted as part of Volume 4, for evaluation of FMTV A1 requirements listed in the ATPD 2131C, Attachment 1. In addition, 2-D drawings for all changes to all variants are required to be submitted with the proposal. The items required to support this analysis and the format for the Offerors input are described in Attachments 24 through 34, and shall be submitted with the proposals, whether changes are made or not, for evaluation. All changes shall be highlighted. Solid models and 2-D drawings shall be prepared IAW C.2.1.1.1.4, except that it is

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acceptable, for their proposal only, for the Offeror to provide solid models in their native solid modeling format. If Offeror uses software other than PRO/E, the Government shall be provided with one license to use the native solid modeling software on a Silicon Graphics Incorporated (SGI) workstation running IRIX-6.5. The license should allow the Government to load and run the software 30 days prior to proposal submission and should run a minimum of 30 DAC, whether they are the successful Offeror or not."

to read "The Offeror is required to provide with their proposal, solid models of their design changes for all variants IAW Section L.5.2 of this RFP. In addition, 2-D drawings for all changes to all variants are required to be submitted with the proposal. The items required to support this analysis and the format for the Offerors input are described in Attachments 24 through 34, and shall be submitted with the proposals, whether changes to the initial Phase I ECP have been made or not, for evaluation. All changes shall be highlighted. Solid models and 2-D drawings shall be prepared IAW C.2.1.1.1.4, except that it is acceptable, for their proposal only, for the Offeror to provide solid models in their native solid modeling format. If Offeror uses software other than PRO/E, the Government shall be provided with one license to use the native solid modeling software on a Silicon Graphics Incorporated (SGI) workstation running IRIX-6.5. The license should allow the Government to load and run the software 30 days prior to proposal submission and should run a minimum of 30 DAC, whether they are the successful Offeror or not. In addition, all other modeling and simulation data of the proposed M1078A1 with winch, M1083A1 with winch, M1088A1 with winch, and M1089A1 with winch shall be submitted as part of Volume 4, for evaluation of FMTV A1 requirements listed in the ATPD 2131C, Attachment 1." This change is followed by a quadruple asterisk.

- i. Section L, Para L.5.4: In the first sentence change "The Contractor shall review the Government Furnished TDP and their... " to read "The Contractor shall review their... ". This change is followed by a quadruple asterisk.

2. Amendment 0004 does not extend the closing date.

*** END OF NARRATIVE A 005 ***

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

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Name of Offeror or Contractor:**C.1 Conformance with Specifications, Drawings and Requirements.**

C.1.1 Vehicle Deliveries. The Contractor, as an independent Contractor and not as an agent or employee of the Government, shall within the schedule and constraints of this Phase II Competitive Rebuy production contract, deliver FMTV vehicles and other supplies in the quantities and for the prices set forth in Section B, Attachments 37 and 38. The vehicles and supplies shall be in conformance with the requirements as detailed in C.1.2 below.

C.1.2 Vehicle Configuration (as illustrated in Attachment 42). The Family of Medium Tactical Vehicles (FMTV) and associated kits/supplies required to be delivered under this contract shall be manufactured in accordance with the following:

C.1.2.1 Order of Precedence for Technical Requirements. The order of precedence for technical requirements of this contract is as follows:

- 1) Contract Clauses, Sections C, H and E in that order.
- 2) ATPD 2131C (Attachment 1)
- 3) Technical Data Package (Attachments 2 & 3) as modified by C.1.2.5
- 4) Other Attachments (Reference J.1)

NOTE: Section I.1 contains the Order of Precedence for the entire contract.

C.1.2.2 Government Configuration. The Government FMTV A1 CR Configurations includes the applicable specifications, drawings, supporting technical data, and special requirements specified therein. The Government Configuration is made up of the ATPD 2131C (Attachment 1), the Technical Data Package (Attachment 2) and supplemental Engineering Change Proposals (ECPs) and Requests for Deviation (RFDs) provided (Attachment 3). These three attachments combine to make the Government FMTV A1 CR Configuration.

C.1.2.3 Contractor Phase II Proposed Changes (Attachment 18). It is presumed that the Contractor has incorporated into his Phase II changes (Attachment 18) the same changes as proposed and tested in Phase I. Contractor may have, however, added, modified or withdrawn Phase I changes, or added new changes based on the following:

1) Contractor may have proposed new changes as necessary to meet added requirements contained in ATPD 2131C (Attachment 1) or in response to Government baseline Phase I Test Incident Reports (TIRs).

2) Phase I TIRs attributed to Contractor proposed Phase I changes which resulted in Test Work Authorization Documents (TWADs) or Failure Analysis & Corrective Action Reports (FACARs).

3) Contractor Phase I changes which had to be modified or withdrawn because of interface issues related to new Government ECPs (contained in Attachments 2 and 3) incorporated into the TDP since Phase I configured vehicles were tested.

4) In cases of duplication between a Government ECP (Attachments 2 and 3) and a Contractor Phase I ECP, the Contractor has the option to use the ECP of their choice.

5) The Contractor may have determined that, based on business judgement, a Contractor change that may have been successfully tested in Phase I was nevertheless withdrawn in the best interests of the Contractor.

C.1.2.4 TDP Review Change Proposals. For purposes of defining the FMTV A1 CR Production Configuration TDP Baseline, the Government FMTV A1 CR Production Configuration TDP (C.1.2.2) is modified to include Phase I Technical Data Package Review Change Proposals (TDPRCPs) Attachment 40. Attachment 40 is defined as a listing of the TDPRCPs from Phase I (28 November 2000 TDP) and updated to include discrepancies or deficiencies found in the TDP dated 1 May 2002 (Attachment 2) and ECPs/Deviations provided in Attachment 3. Each proposal shall contain the information required in order to correct any data deficiency constituting an actual or practical impossibility which would preclude manufacture or assembly.

C.1.2.5 FMTV A1 CR Production Configuration. The FMTV A1 CR Production Configuration is the Government FMTV A1 CR Configuration (C.1.2.2) plus Contractor Phase II changes (C.1.2.3) plus any TDP Review Change Proposals (C.1.2.4) as contained in the Contractor's final proposal and is part of this contract. This FMTV A1 CR Production Configuration shall be the configuration that the Contractor will purchase parts to and build in accordance with, subject to C.1.2.1, and the configuration that the Contractor will warrant pursuant to H.5.2.5.

C.1.2.6 Within 60 DAC, the Contractor shall submit their Contractor Phase II proposed changes as proposed in Attachment 18 for Government Configuration Control Board (CCB) Evaluation. The ECPs shall be prepared and submitted IAW C.2.2, CDRL A003, DI-CMAN-80639C(T) and Instructions for Preparing ECP Forms, Attachment 6.

C.1.2.7 The Contractor shall submit PPEPs for the items identified in their TDPRCP as submitted in their Phase II proposal. The PPEPs shall be prepared and submitted IAW C.2.2, CDRL A005, DI-CMAN-80639C(T) and Instructions for Preparing ECP Forms, Attachment 6. PPEPs shall be submitted within 90 DAC.

CONTINUATION SHEET

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C.1.2.8 The Contractor shall incorporate into the FMTV A1 CR Production Configuration and production vehicles only those PPEPs/ECPs/VECPs/RFDs that have been approved by the Government and authorized by the PCO.

C.1.2.9 Government Production Configuration and TDP. Following incorporation of all contractor changes as specified in C.1.2.6 and C.1.2.7, the updated configuration shall be designated the Government FMTV A1 CR Production Configuration, and the updated TDP shall be designated the Government FMTV A1 CR Production TDP.

C.1.2.10 Government Rights to Contractor ECPs. To the extent permitted under DFARS 252.227-7013, DFARS 252.227-7014, and DFARS 252.227-7015, the Government shall have unlimited rights to the ECPs incorporated into this contract pursuant to C.1.2.3 and C.1.2.4

C.1.3 Vehicle Description.

C.1.3.1 The Family of Medium Tactical Vehicles (FMTV) is comprised of a series of 2 1/2- and 5-ton trucks and trailers that share many common components. In addition to standard cargo models, the family includes dump trucks, tractors, wreckers and long wheel base cargo and chassis. This contract will also include the first production of an expansible van and the High Mobility Artillery Rocket System (HIMARS) chassis (1). The "cab-over" design is capable of operating both on- and off-road at gross combined weight. For the 4x4 Light-Medium Tactical Vehicle (LMTV) Cargo model, this is defined as the weight of the vehicle with full fuel, lubricants, coolant, hydraulic fluid, Basic Issue Items (BII), integral self-recovery winch (if applicable), and troop seats, a 3-man crew, plus gear, a 5,000-pound (2,268 kg) payload and a towed load of 12,000 pounds (5,443 kg). The 6x6 MTV Cargo model, this is defined as the weight of the vehicle with full fuel, lubricants, coolant, hydraulic fluid, Basic Issue Items (BII), integral self-recovery winch (if applicable), and troop seats, 3-man crew, with gear, requirement, with a 10,000-pound (4,536 kg) payload and 21,000-pound (9,526 kg) towed load capacity. Gross vehicle and combined weights may vary for other configurations.

Notes: (1) Although these models are not included in the multi-year base quantity, they will be included in Section H as a ceiling priced option.

C.1.3.2 The FMTV models covered by this contract are described as follows:

MODEL	NOTES	NOMENCLATURE	NSN	
M1078 A1		TRK, CARGO, LMTV w/o winch	2320-01-447-6343	
M1078 A1		TRK, CARGO, LMTV, w/winch	2320-01-447-3888	
M1079 A1		TRK, VAN, LMTV w/o winch	2320-01-447-4938	
M1079 A1	(1)	TRK, VAN, LMTV, w/winch	2320-01-447-4933	
M1080 A1	(1)	TRK, CHASSIS, LMTV w/o winch	2320-01-447-6345	
M1082		TRAILER, CARGO, LMTV	2330-01-449-1775	
M1083 A1		TRK, CARGO, MTV w/o winch	2320-01-447-3890	
M1083A1		TRK, CARGO, MTV, w/winch	2320-01-447-3884	
M1084 A1		TRK, CARGO, MTV, w/MHE	2320-01-447-3887	
M1084A1/RSV	(1)(3)	TRK, CARGO, MTV (HIMARS RSV)	2320-01-495-0110	*
M1085 A1		TRK, CARGO, MTV, LWB	2320-01-447-3891	
M1085 A1	(1)	TRK, CARGO, MTV, LWB, w/winch	2320-01-447-3897	
M1086 A1		TRK, CARGO, MTV, LWB, w/MHE	2320-01-447-3895	
XM1087A1		TRK, VAN EXPANSIBLE w/o winch	2320-01-459-0362	
M1088 A1		TRK, TRACTOR, MTV w/o winch	2320-01-447-3893	
M1088 A1		TRK, TRACTOR, MTV, w/winch	2320-01-447-3900	
M1089 A1		TRK, WRECKER, MTV, w/winch	2320-01-447-3892	
M1090 A1		TRK, DUMP, MTV w/o winch	2320-01-447-3899	
M1090 A1		TRK, DUMP, MTV, w/winch	2320-01-447-6344	
M1092A1	(1)	TRK, CHASSIS, MTV w/o winch	2320-01-447-3894	
M1095		TRAILER, CARGO, MTV	2330-01-449-1776	
M1096 A1	(1)	TRK, CHASSIS, MTV, LWB	2320-01-447-3885	
XM1140	(2)(4)	CHASSIS: HIMARS Launcher Chassis	2320-01-491-3436	*

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Notes: (1) No firm requirements for these models in the multi-year base quantity, but they will be included in Section H as fixed price options.

(2) Although these models are not included in the multi-year base quantity, they will be included in Section H as ceiling priced options.

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(3) The HIMARS Resupply Vehicle (RSV) (5 Ton cargo with MHE) will incorporate the A1 CR changes. *

(4) The HIMARS Launcher Chassis will remain the HIMARS A1 TDP chassis and no A1 CR changes will be incorporated. Once production award is made, the A1 CR changes will be briefed to the HIMARS PM for consideration for incorporation on the launcher chassis on a case-by-case basis. *

C.1.3.3 Kits. The following Kits are included in this contract:

C.1.3.3.1 Troop Seats - shall be installed on all M1078A1 LMTV Cargo, M1083A1 MTV Cargo and M1085A1 MTV LWB Cargo vehicles.

C.1.3.3.2 Arctic Kits - (Option requirement - See H.9)

C.1.3.4 Paint.

C.1.3.4.1 Camouflage. The standard vehicle paint is 3 color camouflage pattern. A list of approved drawings is contained at Camouflage Paint Drawings, Attachment 4.

C.1.3.4.2 Tan color 686A (Chip #33446, Fed Std 595).

C.1.3.4.3 Green color 383 (Chip #34094, Fed Std 595) Original base coat full coverage.

C.1.3.4.4 Sand color (Chip #30372, Fed Std 595) Original base coat full coverage.

C.1.4 Vehicle, TDP and Logistics Warranties. The vehicles shall be covered by Warranties as described in Section H.5. The cost of these warranties shall be included in the vehicle unit price.

C.1.5 FMTV Technical Data Package/3D Solid Model. The FMTV TDP, Attachment 2, is converted to "Pro/Engineer" 3D Solid Models. Attachment 39 contains the currently available 3D Solid Models. The Contractor shall provide 3D PRO/E solid models of the vehicles M1078A1 and M1083A1 after updating with the Contractor proposed changes within 240DAC, IAW CDRL A001, DI-SESS-81000B. The Contractor shall furnish 3D PRO/Engineer solid models of the remaining FMTV A1 CR variants after updating with Contractor proposed changes within 300 DAC award or 300 days after receipt of the Government provided 3D solid models, whichever is later, IAW CDRL A001, DI-SESS-81000B. The Contractor is not responsible for modeling components missing from the Government provided 3D solid model, unless that item has been impacted by a Contractor initiated change. It will be the Contractor's responsibility to integrate periodic Government provided updates for revised/additional components into the model. The Contractor shall submit modeling and simulation data for the M1079A1 without winch, M1085A1 without winch, XM1087A1 without winch and M1095A1 with winch 90 DAC or 90 days after receipt of Government baseline model data sheets, whichever is later, IAW CDRL A089, DI-SESS-81000B. ****

C.1.6 Definitions.

C.1.6.1 Days/Months after Contract

C.1.6.1.1 Unless otherwise specified, Days after Contract (DAC) refers to calendar days after contract award.

C.1.6.1.2 Unless otherwise specified, Months after Contract (MAC) refers to the months following award calculated from the date of award.

C.1.6.1.3 Years. Unless otherwise specified, Fiscal Year (FY) refers to the Government Fiscal Year. The Government FY is from 1 October until the following 30 September. Calendar Year (CY) is from 1 January through 31 December.

C.1.6.2 A deficiency which precludes actual manufacture and assembly is one in which the contract cannot be performed in strict accordance with the technical data by the Contractor or any other responsible source of supply because of drawing or specification error.

C.1.6.3 A deficiency which precludes practical manufacture and assembly is one in which performance of the contract in strict accordance with the technical data would entail extreme and unreasonable difficulties and exorbitant costs on the part of the Contractor, or any other responsible source of supply.

C.1.6.4 Reserved.

C.1.6.5 Deviation. A Request for Deviation (RFD), which is submitted before commencing production of an item under contract, is a one-time request for authorization to deviate from a requirement of the FMTV Baseline Technical Data Package.

C.1.6.6 Reserved.

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C.1.6.7 Warranty of Technical Data. The Contractor guarantees that their Technical Data is free from deficiencies which would preclude, from an actual or practical the manufacture or assembly of the end item and that items manufactured in accordance with the Contractors Technical Data will meet or exceed all contract requirements.

C.1.7 Embedded Diagnostics.

C.1.7.1 Integration of Embedded Training and Diagnostics. The embedded training and diagnostics Block Improvement applies to all configurations and variants of the FMTV. The Contractor shall integrate the equipment and software necessary into the existing vehicle architecture to meet the embedded training and diagnostics requirement in time for delivery of the first vehicle of the third program year. The Contractor shall incorporate the necessary modifications into all appropriate technical and logistics documentation to reflect the integration of embedded training and diagnostics. An incentive up to \$350,000 may be available for the degree of simplicity of required training inherent in the vehicle's design as demonstrated during the Validation/Verification Training Time (Instructor and Key Personnel Training PY2) for repairs and services. All repairs and maintenance should be designed to be executed with a minimum of 50% reduction in the time required to train for repairs and services of the current FMTV. There shall be no increase of maintenance complexity or degradation of reliability or performance. This incentive is not subject to the Disputes Clause FAR 52.233-1.

C.1.7.2 BIT/BITE and Embedded Diagnostics Requirements. The FMTV shall be capable of performing vehicle health monitoring and health checks using internal embedded resources. The FMTV shall employ standard sensors and data busses that will monitor data, signals, measurements and built-in test equipment. These devices shall provide a comprehensive source of data to accomplish complete and accurate system level diagnostics and fault isolation to the serviceable component level and system health monitoring for critical subsystems consisting of the Engine (including all ICE functions of the SPORT/ICE, as defined in the current FMTV IETM), Transmission, Central Tire Inflation and ABS Brake system. The minimum acceptable level of diagnostics and health check monitoring is defined by the fault code list in Attachment 43, Embedded Diagnostics Function List. FMTV health status and diagnostic information shall be displayed to operator and crew, as well as maintenance personnel. The FMTV shall use common data/information interchange network in accordance with standards defined in the Joint Technical Architecture - Army (JTA-A), Version 6.5 or later version, to provide access to FMTV health data. Diagnostic capability shall be compatible with the Army Diagnostic Improvement Program, the existing FMTV IETM, and the Global Combat Support Systems GCSS-A. The confidence level goal is 99% accuracy to an ambiguity group of 1. The Contractor shall establish a complete program to meet all the requirements and result in the incorporation of the block improvements in the first vehicle of the third program year and included in the production price of the vehicle for PYs 3 through 5. Design must be capable of retrofit to the first vehicle of the first program year.

C.1.7.3 Enhanced Embedded Diagnostics and Prognostics. The Contractor shall identify initiatives to enhance embedded diagnostics and/or add prognostics as technology matures. The Government will consider Enhanced Embedded Diagnostics/Prognostics Initiatives (EEDPIs) and decide whether to pursue any of them further. Subsequent Contractor development of EEDPI concepts may be accomplished via a Government-directed STS effort.

C.1.7.4 Embedded Training. Simplicity of maintenance actions, ease of access and full Embedded Training (ET) is the preferred approach to Training Aids, Devices, Simulators and Simulations (TADSS). ET is computer based and should incorporate a mix of audio and text within an interactive training scenario. ET is intended to facilitate individual, self paced training outside of a classroom environment. ET shall include training tasks that can be performed in the deployed theater, in garrison and in a field environment. The Contractor shall leverage already developed appended and stand-alone systems and technology to the greatest extent possible, with the intent of maximizing standardized training and systems commonality with the potential of significant cost savings.

C.1.7.4.1 Interactive Multimedia Instruction (IMI) Definition: IMI is a term applied to a group of predominantly interactive, electronically delivered training and training support products. IMI products include instructional software and software management tools used in support of instructional programs.

C.1.7.5 Requirements. The Contractor shall embed the training programs listed below into the existing CR IETM. The task training shall be in an IMI program format developed using the existing EMS-2 software. All training programs embedded in the CR IETM shall have the same delivery capabilities as the IETM itself. The Government Training POC will provide a sample IMI program at the Contract Start of Work Meeting.

- A. Operator Level (-10)
 - a. Cab tilt procedures
 - b. PMCS
 - 1. Air tanks service
 - 2. Air dryer service
 - 3. Fluid level checks
 - c. Preparation for internal air transport
 - d. Proper use of the WARMUP/OFF/RETARD switch

- B. Unit Level (-20)

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- a. Air dryer maintenance
- b. Wheel bearing shim pack adjustment
- c. Cab air/hydraulic system theory of operation and maintenance
- d. Starting system theory of operation
- e. Charging system theory of operation
- f. Pneumatic system theory of operation
- g. Hydraulic system theory of operation (wrecker)
- h. CTIS seal replacement procedures

- C. Direct Support Level (-34)
Axle input pinion seal replacement (rear axle)

- D. General Support Level (-34)
3 Stage hydraulic pump repair (wrecker)

C.1.7.6 Design Information. Each IMI shall:

- A. Have a "hot button" in the CR IETM that will allow it to be brought up when the button is depressed. The "hot button" shall be marked "training" to identify for the user that training is embedded for that particular task or task related theory of operation.
- B. Include voice and animation where appropriate
- C. Depict respective "flows" in a "Point-to-Point" format for the starting, changing, pneumatic and hydraulic system.
- D. Have, at a minimum, a ten point multiple choice objective test. Exit criteria for each test shall be a minimum of 70% correct answers to indicate a minimum mastery level of the related subject matter material.
- E. Provide feedback indicating whether or not the answer selected was correct or incorrect. The feedback shall be placed at the end of the test and shall indicate which answers were responded to correctly/incorrectly. *
- F. Be developed in such a manner that a student shall not gain access to the correct answers.
- G. Be "user friendly" and allow the student to be guided through the learning program with ease and without confusion in a step-by-step fashion.

C.1.7.7 Delivery Information.

- A. Should the Contractor have IMI programs already developed or access to a source for any of the IMI requirements cited above, the Government Training POC will review the programs to make a determination for suitability and placement into the CR IETM.
- B. Resource information for development of the above IMI products can be found in MIL-HDBK-29612-3A, Development of Interactive Multimedia Instruction (IMI), part 3 of 5 parts. This handbook can be accessed at <http://dtswg.msiac.dmsomil/revision/hdbk3.pdf>.
- C. Development and delivery of the IMI training packages shall be in accordance with Data item Description, DI-SESS-8526B(T)IAW CDRL A086.
- D. Development and delivery of the exit criteria test for each IMI program shall be in accordance with Data Item Description, DI-SESS-81525B(T)IAW CDRL A087.

C.1.8 Total Contract Effort. This contract shall consist of Vehicle Production, Program Support, and System Technical Support (STS) and options contained in Section H. These components are identified as follows:

C.1.8.1 Vehicle Production. Vehicles shall be produced IAW Section C.1.

C.1.8.2 Program Support. Program Support IAW C.2 shall include all Contractor effort necessary to support production and delivery of base and option vehicles listed in H.9. This includes, but is not limited to parts obsolescence, new materials/vendors, and/or manufacturing processes. Program Support will be fixed price and will include the following elements, which are addressed in detail in Sec. C.2 of this contract:

Program Support Categories

- A. - Pre-Production
- Pre-production Engineering Proposals (PPEPs)
- Test ECPS

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B. Production Effort

- ECP/VECP Requirements - (Contractor generated)- No cost if implementation does not exceed \$10,000
- Value Engineering
- Government Testing Requirements
 - a. First Production Vehicle Inspection (FPVI)
 - b. Production Verification Testing (PVT)
 - c. Component First Article Tests (CFAT)
 - d. System Support Package (SSP)
 - e. New Equipment Training
 - f. PVT Training
 - g. I&KPT
- Vehicle Tracking Report
- The Army Maintenance Management System (TAMMS) Equipment Control Records
- Integrated Logistics Support (ILS) Management in Support of Contractor Generated ECPs, to include: Logistics Management Information (LMI), Provisioning, Publications Revision, Vehicle Refurbishment, Army Oil Analysis Program (AOAP) Report Update, Logistic Demonstration, System Support Package
- Training Instructor and Key Personnel (I&KP) Training

C. Program Management

- Meeting/IPT Requirements - agendas, minutes
- CDRLs and Data Item Descriptions (DIDs)
- Cost Related Reports
 - a. Contractor Cost Data Reporting (CCDR) Requirements
 - b. Cost Reports for Cost Reimbursable CLINs
- Configuration Management Plan
- Life Cycle Cost Management Initiatives
- Maintainability Initiative

C.1.8.3 System Technical Support (STS). STS consists of separate cost reimbursement options for this production contract. Specific tasks will be assigned through work directives by program year. The Contractor shall serve as custodian of the FMTV TDP for the duration of this contract. STS includes but is not limited to Government-directed ECPs, ECPs in support of fielded A1/A0 vehicles, Logistics effort in support of Government-directed ECPs, and the Expansible Van, and the Maintenance Technical Representatives (MTRs). STS is identified in more detail in Sec C.3 of this contract. **

C.2 Program Support (CLIN 1001AA, 2001AA, 3001AA, 4001AA and 5001AA)

C.2.1 Configuration Management: The Contractor shall maintain a complete Configuration Management Program that contains plans and procedures for its implementation. The program shall contain and define the procedures for implementing configuration management planning and management, configuration identification, configuration control, configuration status accounting, configuration verification and audit, and data management. The Contractors Configuration Management program shall track engineering changes from conception through incorporation to the production hardware, TDP, spare parts system. The Contractor's electronic system shall maintain and update all configuration management change development, tracking, and implementation data. Change implementation shall be identified to the part lot, and vehicle serial number. The Contractor's configuration system shall be able to track by drawing/part revision level and identify the configuration differences between production TDP(s) and the STS TDP. Upon Government request, the Contractor shall make available any and all of the Configuration Management Program documentation, such as plans, procedures and reports. The Contractor's documentation shall be complete and up-to-date and shall be provided to the Government upon request. The Contractor may use MIL-HDBK-61A(SE) for guidance.

C.2.1.1 PPEP/RFD/ECP/VECP Requirements (CDRLs A003, A004, A005, A006, and A007).

C.2.1.1.1 General. Only no-cost/cost reduction type changes will be generated under the Program Support CLINs of this contract. The Contractor will use PPEPs/RFDs/ECPs/VECPs as appropriate. ECPs developed by Government direction shall be incorporated into this contract by contract modification. The Contractor shall develop at no additional cost ECPs to resolve deficiencies as a result of First Article Test failures. The Contractor shall submit Requests for Deviation (RFD) to effect a temporary physical change to the production configuration. The Contractor shall submit no cost ECPs to effect a permanent change to the production configuration and the TDP. The Contractor may submit Value Engineering Change Proposals (VECPs) that impact the ATPD 2131C, Attachment 1, the TDP, Attachment 2, the 3D Solid Model, Integrated Logistics Support (ILS), Manpower Personnel Integration (MANPRINT), and Life Cycle Cost (LCC) to effect permanent changes to the production hardware and where cost savings are applicable. The Contractor shall prepare and submit Pre-production Engineering Proposals (PPEPs) to correct the manufacturing deficiencies as documented in the Contractors Technical Data Package Review Change Proposal which was developed under the Phase I contract and submitted with their Phase II contract proposal. All PPEP/RFD/ECP/VECP packages with marked drawings, impact sheets, technical manual/ RPSTL change pages, revised packaging data sheets shall be submitted in a *.pdf file. Pro/ENGINEER solid models will be submitted as separate attached files IAW C.2.1.1.1.4.

C.2.1.1.1.1 Submittal of Data. All changes (PPEPs/RFDs/ECPs/VECPs) that impact ATPD 2131C, Attachment 1, the FMTV TDP, Attachment 2,

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the 3D Solid Model, the Technical Manuals/ILS, MANPRINT, or LCC shall be submitted to the PCO for approval. See paragraph C.2.6.1.1 for electronic data submission requirements.

C.2.1.1.1.2 Compatibility with A1/A0 Technical Data Package and Fielded FMTV A1/A0 Vehicles. The Contractor shall identify within the PPEPs/RFDs/ECPs/VECPs generated under Program Support and/or STS of this contract whether the proposed change is compatible with the FMTV A1/A0 TDP and currently fielded FMTV A1/A0 vehicles. If the proposed change is not compatible or creates an incompatibility with the FMTV A1/A0 spare/repair parts, the Contractor shall identify the incompatibility and possible consequences or adverse effects that will occur if the change is implemented.

C.2.1.1.1.3 Reserved. *

C.2.1.1.1.4 Drawings/Solid Models. With each proposed change package (PPEPs/RFDs/ECPs/VECPs), the Contractor shall provide a 3D Solid Model in Pro/ENGINEER, Version 2001, of the affected parts and their assemblies IAW Attachment 28. The Contractor shall provide 2D drawings of the affected parts clearly marked to identify the proposed change in a From - To condition. The marked drawings shall be provided in the same software as the change package (e.g. Microsoft, Adobe Acrobat). If the proposed change package is adding a new part for which a drawing or solid model does not exist, the Contractor shall provide a solid model and 2D drawing with their package. New drawings shall be Level III(MIL-STD-100) and prepared IAW ANSI Y14.5M, ANSI Y14.100, and ANSI Y14.24 per DI-SESS-81000B, CDRL A001. Solid models should be developed using the guidelines presented in the document titled 3 Dimensional Technical Data Package Configuration Management & Modeling Interim Operating Procedure for PM-FMTV provided as TACOM 3D TDP Interim Operating Procedure, Attachment 5 to this contract. To the extent permitted under DFARS 252.227-7013, DFARS 252.227-7014 or DFARS 252.227-7015, the Government shall have unlimited rights to the drawings or solid models provided under this contract.

C.2.1.1.1.5 ECP/VECP Co-User Requirements - If and/or when the Contractor prepares an ECP against documents impacting configuration items which do not belong to the Family of Medium Tactical Vehicles, regardless of whether the Contractor is the drawing custodian or not, the Contractor shall electronically provide a complete ECP package IAW A003, DI-CMAN-80639C(T), and A004, DI-CMAN-80639C(T) to the co-user(s), requesting comments on the change. When the Contractor is not the custodian of the affected document, the Contractor shall prepare and provide a complete ECP package to the custodian and all known co-users, requesting concurrences / nonconcurrences / comments. (NOTE: The Government shall provide the Contractor access to TACOM Technical Data/Configuration Management System (TD/CMS) or Automated Configuration Management System (ACMS) in order for the Contractor to be able to verify custodian and co-users.) If the Contractor does not receive a response from a co-user/custodian by the Government Configuration Control Board (CCB), the Contractor shall notify the Government Configuration Management Functional Technical Representative (CM FTR) of the non-response. The Government CM FTR will then contact the appropriate Government office to obtain the co-user concurrence.

C.2.2 Engineering Change Proposals (CDRL A003)

C.2.2.1 PPEP/ECP/VECP Number Assignment. The Contractor shall request a block of PPEP/ECP/VECP numbers from the Configuration Management (CM) Functional Technical Representative (FTR). These numbers shall be used on an individual basis as a control identifier for the change packages. Once a number is assigned to the first submission of a change package, that number shall be retained for all subsequent submissions of that change package. Once a PPEP/ECP/VECP is approved, it cannot be changed, supplemented, or revised. A new ECP will be developed and submitted to correct, change, or amend an existing approved ECP/VECP. The Contractor shall maintain records of where and when each number was used. The Contractors records shall track each number from point of assignment through incorporation to the production line. These records shall be provided to the Government upon request. When a PPEP/ECP/VECP requires change or revision prior to approval, the changed and/or revised proposal shall be identified by adding the identifier "R*", where * is the number of the revision. These identifiers will become a permanent part of the ECP number. The complete ECP number including change/revisions identifiers shall not exceed 15 characters.

C.2.2.2 Engineering Change Proposals (ECPs). Under the terms of this clause, the Contractor shall prepare complete ECPs IAW the instructions at Instructions for Preparing ECP Forms, Attachment 6. The Contractor may use the following standard ECP Forms: DD 1692, DD 1692/2, DD1692/3, DD1692/4 and DD1692/5. The Contractor may develop their own forms for the submission of PPEPs/ECPs/VECPs. Contractors forms will have to be agreed upon by the Project Manager, Medium Tactical Vehicles (PM, MTV) Configuration Management Office. These forms will contain all the same information required by the standard ECP Forms. Each ECP shall contain an ECP Enclosure List and ECP Interchangeability Form. Instructions and examples of these forms are provided also in Instructions for Preparing ECP Forms, Attachment 6. Each ECP shall contain applicable Specification Change Notices (SCNs) and Notices of Revisions (NORs) CDRL A002, DI-CMAN-80642C.

C.2.2.2.1 With each ECP submitted consistent with C.2.1.1.1.2, the Contractor shall justify the need for making a permanent change to the production configuration and FMTV TDPs. This justification shall address what effect the proposed change will have on the production, fielding, retrofit, spare/repair parts, fielded A1/A0 configurations of FMTVs, performance, manufacturing, quality, maintenance, packaging, MANPRINT, logistics, safety, transportability, cost (production and support), electromagnetic environmental effects and nuclear survivability (if applicable). For Interface Control ECPs, the Contractor shall obtain concurrence from all interface parties and include their concurrence as part of the ECP package. When introducing new parts to the production configuration, the Contractor shall develop and submit Pro/ENGINEER solid model and drawings IAW paragraph C.2.1.1.1.4. Any ECPs that the Contractor initiates shall be prepared and submitted IAW CDRL A003, DI-CMAN-80639C for evaluation and approval.

C.2.2.2.2 ECP Enclosure List - For each PPEP/ECP/VECP, the Contractor shall prepare an ECP Enclosure List and incorporate it as Page 2

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of the ECP package. The list shall identify all documents (i.e. changed drawings, new drawings, packaging sheets etc.) contained in the ECP package. In addition, the list shall identify all end items affected, what specific elements will be affected, what other ECPs are pending against the documents listed, and what National Stock Numbers (NSNs), if any, will be impacted by any part number change referenced in the ECP. Instructions for completing the ECP Enclosure List are found at Attachment 6.

C.2.2.2.3 ECP Interchangeability Form - For each ECP/VECP, the Contractor shall provide an ECP Interchangeability Form to document the effect the proposed change has on interchangeability or when there is an add or delete of parts. The Interchangeability Form shall follow the ECP Forms and precede the NORs in each change package. Instructions for completing the ECP Interchangeability Form are found at Instructions for Preparing ECP Forms, Attachment 6.

C.2.2.2.4 Notice of Revision (NOR) A002 DI-CMAN-80624C. The Contractor shall prepare a NOR for each drawing affected by an ECP. The Contractor shall utilize the DD Form 1695 and the instructions provided in Instructions for Preparing ECP Forms, Attachment 6 of this contract. The changes shall be described in the body of the form in a FROM - TO format. A NOR form shall be prepared for each drawing changed, obsoleted, or superseded by the ECP. A NOR form is required for new drawings not previously released to the Government TDP.

C.2.2.2.5 Specification Change Notice (SCN). The Contractor shall prepare and process SCNs when a permanent change to the system specification is warranted. The SCN shall be submitted in lieu of a NOR as part of a Class I ECP. The Contractor shall use the SCN form DD1696 and instructions at Instructions for Preparing ECP Forms, Attachment 6 when preparing an SCN.

C.2.2.3 Value Engineering Change Proposals (VECPs) - VECPs shall be prepared IAW CDRL A004, DI-CMAN-80639C, pursuant to the VE Clause, FAR 52.248-1 and in the same manner as Class I ECPs. (See para C.2.2) VECPs shall be prepared IAW the forms and instructions provided in Instructions for Preparing ECP Forms, Attachment 6. The VECP shall address what effect the proposed change will have on the TDP, performance, manufacturing, quality, maintenance, packaging, MANPRINT, logistics, safety, transportability, spare/repair parts, cost savings, and nuclear survivability (if applicable). It must also address what effect the VECP will have on the current production, the A1/A0 fielded vehicles, and retrofit. For VECPs affecting interface control, the Contractor shall obtain concurrence from all interface parties and include such concurrences as part of the VECP package (CDRL A004).

C.2.2.4 Preproduction Engineering Proposals (PPEPs) CDRL A005 DI-CMAN-80639C.

C.2.2.4.1 The Contractor is required to correct those deficiencies to technical documentation listed in Attachment 40 without any equitable adjustment in the contract price or delivery schedule under the Changes clause or any other clause except as is otherwise provided in this clause. Only those deficiencies identified in the TDP Review Change Proposal which would preclude actual or practical manufacture or assembly, including errors or omissions in drawings, tolerance stack-ups beyond the overall specified tolerance limitations for any item, dimensions resulting in no-fit conditions, requirements for material which are not readily available or suitable for production, processing requirements not suitable for production, are to be corrected under this clause. This clause is not intended to place upon the Contractor any design responsibility under this contract except as provided herein. Therefore, the Contractor cannot under this clause add, remove, or replace parts, components, or hardware. (For changes see C.2.2)

C.2.2.4.2 Prior to First Article Testing (FAT) (see schedule in section F), the Contractor shall submit a final list of recommended corrective actions in the form of a data change proposal, hereinafter referred to as a PPE Proposal (PPEP) in order to correct any deficiency which would preclude practical manufacture or assembly in order to assure that:

- a. The contract items including all components, assemblies, and parts can be produced, fabricated, and assembled in strict accordance with the technical data, corrected as required by this clause.
- b. The quality assurance provisions are compatible with all other technical data.
- c. The engineering associated lists are compatible with all other technical data.
- d. The parts and materials required for vehicle assembly can be procured and manufactured in accordance with the applicable technical data of this contract.

C.2.2.4.3 The Contractor shall prepare a DD Form 1692 Engineering Change Proposal (ECP) Page 1 or equivalent, ECP Enclosure List, and a DD Form 1695, Notice of Revision (NOR), CDRL A002, DI-CMAN-80624C, for each PPEP. The final document shall be clearly identified by bold marking PPEP at the top of each page. In addition to the preparation instructions found in Instructions for Preparing ECP Forms, Attachment 6, the PPEP shall clearly and explicitly identify the existing condition as well as the proposed change with particular emphasis on the need for change. Each PPEP package shall include applicable drawings with the changes clearly marked. Each PPEP package shall include any other technical data necessary for expeditious evaluation by the Government.

C.2.2.4.4 Approval Requirements. The Government shall approve/reject in writing any PPEP by providing notice to the Contractor within 25 calendar days after receipt IAW CDRL A005, CDRL-CMAN-80639C. .

C.2.2.4.5 Upon Government approval of a PPEP, the Contractors obligations as relates to such PPEP shall be discharged to the extent that the deficiency is corrected in all vehicles produced under this contract. If the incorporation of such approved PPEP does not correct the deficiency, the Contractor shall yet remain responsible for resubmitting a request for further changes to the technical data without increase in contract price or extension in delivery schedule and incorporate such PPE change as approved into the contract items

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not yet accepted by the Government.

C.2.2.5 Request For Deviation. When deviations to the FMTV Production Configuration or any other contract requirement are considered necessary by the Contractor, a RFD may be submitted utilizing DD Form 1694 and prepared according to the instructions provided at Instructions for Preparation of Request for Deviation, Attachment 7 and CDRL A006 DI-CMAN-80640C. The RFD shall be annotated by the Contractor to reflect the anticipated production effectivity point by vehicle serial/registration number and date. Deviations and Waivers shall contain copies of revised Solid Models and affected drawings IAW para. C.2.1.1.1.4 as well as any other supporting data necessary to fully understand the proposal and make a determination. Any RFDs, which if approved, would require a decrease to the contract price, shall contain the required cost proposal data and shall be submitted with the RFD package. The cost proposal data shall be prepared IAW Section I of this contract and contain pricing data to support cost evaluation, negotiation, and an equitable adjustment to the contract.

C.2.2.6 Effectivity Certification. Changes resulting from PPEPs/RFDs/ECPs/VECPs will be incorporated to the production line upon notification by the PCO. Each PPEP/ RFD/ECP/VECP shall be applied to the production line at a single cut-in point (single vehicle), in their entirety. For each change document, the Contractor shall prepare and submit an effectivity cut-in certification according to the instructions at Instructions for Preparing ECP Forms, Attachment 6. The Contractor shall obtain Defense Contract Management Agency (DCMA) verification before electronically submitting the effectivity form to the Government (CDRL A007).

C.2.3 Packaging Development Requirements

C.2.3.1 Packaging Development for Value Engineering Change Proposals (VECP) and Engineering Change Proposals(ECP). The Contractor shall develop and provide a packaging impact statement for each VECP/ECP. The packaging impact statement shall include an Item Description Report for each affected item. The impact statement shall also include an alternate schedule for delivery of the packaging data if the data will not be available within 90 days of approval of the VECP/ECP.

C.2.3.2 Packaging Development. The Contractor shall develop initial packaging, maintain and update all packaging data for items assigned Uniform Source Maintenance and Recoverability (SMR) codes equal to PA, PB, PC, PE, PG, PH, KF, & KB. Items that will not require packaging development are those items with packaging data already in the TACOM Packaging File called PACQ or FEDLOG/FLIS and those assigned a Contractor and Government Entity Code (CAGE) of: IT416, 21450, 80204, 96906, 10060, 24617, 80205, 99237, 80244, 81343, 81346, 81348, 81349, 81352, 88044. Nor shall initial packaging data be provided if the Contractors screening of TACOMs Packaging Data Status Report determines that a Level A packaging record is on file. The Government will supply quarterly copies of TACOMs Packaging Data Status Report by e-mail. The Contractor shall provide the necessary personnel, facilities, equipment, material, and the electronic data interface. The Contractor shall provide facilities, equipment, materials, and access to the provisioned items for packaging development. The Contractor shall include information for each of the items so TACOM can determine the adequacy of the packaging submittal. This includes item drawings and data such as: Source, Maintenance & Recoverability codes, Unit of Issue codes, Unit of Measure, Measurement Quantity, and copies of applicable Material Safety Data Sheets. The Contractor shall furnish item drawings and notes sufficient for reviewing the packaging designs in hard copy reproductions or IAW CDRL A008, DI-PACK-80121B.

C.2.3.3 Item Description. The Contractor shall describe item characteristics and assess packaging requirements. The Contractor shall prepare search requests and determine if an existing design is suitable for each repairable item except those items repairable at Organizational Level Maintenance. The Contractor shall submit the Item Description Report IAW CDRL A008, DI-PACK-80121B.

C.2.3.4 Packaging Related LMI Data Products (CDRL A088, Logisitics Management Information (LMI) Data Products).
 The Contractor shall submit LMI data products in electronic format. The data provided shall apply to a single item in an ASCII text format, see DI-ALSS-81529, packaging data products. The data provided shall be for every item requiring packaging data. The required packaging related LMI data products are as detailed below for Appendix B of MIL-PRF-49506:

<u>Data Products Dictionary #</u>	<u>Data Title</u>	
0680	NATIONAL STOCK NUMBER (NSN)	*
0220	PACKAGING INDICATOR CODE (PIC)	*
1440	TYPE STORAGE CODE (TSC)	*
1460	PACK LEVEL REFERENCE INDICATOR	*
0140	PACKAGING DATA PREPARER	*
1190	SHELF LIFE CODE	*
1200	SHELF LIFE ACTION CODE	*
1050	PACKAGING REFERENCE	*
0480	ITEM NAME	*
1550	ITEM WEIGHT	*
1530	ITEM LENGTH	*
1530	ITEM WIDTH	*
1530	ITEM DEPTH	*
0750	PACKAGING CATEGORY CODE	*

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1250	SPECIAL MARKING CODES	*
0980	QUANTITY PER UNIT PACK	*
0450	QUANTITY PER INTERMEDIATE PACK	*
1050	ITEM DRAWING NUMBER	*
0140	CAGE	*
0660	PRESERVATION METHOD CODE	*
0130	CLEANING METHOD CODE	*
0180	PRESERVATION MATERIAL CODE	*
1590	WRAP MATERIAL CODE	*
0200	CUSHIONING MATERIAL CODE	*
0210	CUSHIONING THICKNESS CODE	*
1450	UNIT CONTAINER CODE	*
0440	INTERMEDIATE CONTAINER CODE	*
1460	UNIT CONTAINER LEVEL CODE	*
0760	PACKING REQUIREMENTS CODE	*
1550	UNIT PACK WEIGHT	*
1530	UNIT PACK LENGTH	*
1530	UNIT PACK WIDTH	*
1530	UNIT PACK DEPTH	*
1520	UNIT PACK CUBE	*
1290	IN-THE-CLEAR INSTRUCTIONS	*
0360	HAZARDOUS CODE	*
1270	SPI DATE	*
1280	SPI REVISION	*
1220	SOURCE, MAINTENANCE AND RECOVERABILITY (SMR CODE)	*
1420	TYPE OF CHANGE CODE (TRANSACTION TYPE)	*
1470	UNIT OF ISSUE (UI)	*
1510	UNIT OF MEASURE (UM)	*

C.2.3.4.1 Documentation. *

The Contractor shall provide documentation with data submittal, as necessary, to permit the government reviewer to determine the adequacy of the prepared packaging analysis and packaging related LMI data. This includes item drawings and copies of Material Safety Data Sheets. Additionally, performance test reports and photographic records of packaged item before and after testing shall be delivered for every SPI. *

C.2.3.4.2 Coding. The following codes are not acceptable for use when using the Select Item Coding: *

- a. Table J.I - Code ZZ *
- b. Table J.Ia - Code HM, KG, and KH *
- c. Table J.II - Code Z *
- d. Table J.III - Code ZZ *
- e. Table J.IV - Code ZZ *
- f. Table J.V - Code ZZ *
- g. Table J.VI - Code X, & Z *
- h. Table J.VII - Code 10, F5, MY, NY, NZ, RC& ZZ *
- i. Table J.VIII - Z *
- j. Table J.IX - Z, 4 & 0 *

C.2.3.4.3 Formatting. The electronic format shall be as below: *

FIELD	POSITION	LENGTH	
NATIONAL STOCK NUMBER	1-13	13	*
PACKAGING INDICATOR CODE	14-16	3	*
TRANSACTION TYPE	17	1	*
LOP A TYPE STORAGE CODE	18	1	*
LOP B TYPE STORAGE CODE	19	1	*
LOP C TYPE STORAGE CODE	20	1	*
LOP A PACK LEVEL REFERENCE INDICATOR	21	1	*
LOP B PACK LEVEL REFERENCE INDICATOR	22	1	*
LOP C PACK LEVEL REFERENCE INDICATOR	23	1	*
LOCAL CONTROL	24-26	3	*
DOCUMENT REVISION	27-28	2	*

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DOCUMENT DATE	29-34	6	*
NUMBER OF SHEETS	35-37	3	*
TD/CMS	38	1	*
SHELF LIFE	39	1	*
PACKAGING REFERENCE	40-49	10	*
ITEM NAME	50-58	9	*
ITEM WEIGHT	59-63	5	*
ITEM LENGTH	64-67	4	*
ITEM WIDTH	68-71	4	*
ITEM DEPTH	72-75	4	*
PACKAGING CATEGORY	76-79	4	*
SPECIAL MARKING	80-81	2	*
QUANTITY PER UNIT PACK	82-84	3	*
INTERMEDIATE CONTAINER QUANTITY	85-87	3	*
CAGE	88-92	5	*
PART NUMBER	93-113	21	*
PART INDICATOR	114	1	*
HAZARDOUS MATERIALS CODE	115	1	*
PRESERVATION METHOD	116-117	2	*
CLEANING AND DRYING	118	1	*
PRESERVATIVE MATERIAL	119-120	2	*
WRAP MATERIAL	121-122	2	*
CUSHIONING AND DUNNAGE	123-124	2	*
CUSHIONING THICKNESS	125	1	*
UNIT CONTAINER	126-127	2	*
INTERMEDIATE CONTAINER	128-129	2	*
UNIT CONTAINER LEVEL	130	1	*
LEVEL A PACKING CODE	131	1	*
LEVEL B PACKING CODE	132	1	*
LEVEL C PACKING CODE	133	1	*
UNIT PACK WEIGHT	134-138	5	*
UNIT PACK LENGTH	139-142	4	*
UNIT PACK WIDTH	143-146	4	*
UNIT PACK DEPTH	147-150	4	*
UNIT PACK CUBE	151-157	7	*
OPTIONAL PROCEDURE INDICATOR	158	1	*
LEVEL A SUPPLEMENTAL INSTRUCTIONS	159-208	50	*
SPI REVISION	209	1	*
SPI DATE	210-214	5	*
CONTAINER NATIONAL STOCK NUMBER	215-227	13	*
LEVEL B SUPPLEMENTAL INSTRUCTIONS	228-277	50	*
LEVEL C SUPPLEMENTAL INSTRUCTIONS	278-327	50	*
APPROVAL	328-336	9	*
COMMENTS	337-386	50	*
STATUS	387-394	8	*
TRANSACTION DATE	395-400	6	*

Transactions must be submitted in an ASCII delimited text format using commas as delimiters. Quotation marks
 amy be used as text qualifiers but are not required. *

C.2.3.5 Special Packaging Instructions. The Contractor shall develop, maintain and update the Special Packaging Instruction for each special group item. Packaging processes and materials shall be described for cleaning, drying, preserving, packing, marking, and unitization. Figures and narrative data shall be developed to describe the form, fit and function of packaging in sufficient detail for production. The format and content of Special Packaging Instructions shall be IAW CDRL A0008, DI-PACK-80121B. The Contractor shall submit TACOM approved Special Packaging Instructions data IAW CDRL A008, DI-PACK-80121B.

C.2.3.6 Shipment and Storage Instructions. The Contractor shall develop only new Equipment Preservation Data Sheets for Shipment and Storage (EPDS) instructions. The Contractor shall maintain and update all the EPDS. The Contractor shall develop packaging for new Basic Issue Items (BII) and Components of the End Item (COEI). BII shall be packaged separately from COEI. The Contractor shall determine stowage locations and securement provisions. Stowage requirements that deter pilferage and provide for transportation clearances shall be developed. The BII and COEI shall be packed into wood container(s). Stowage provisions shall not interfere with lifting, tie down or other transportation handling. The Contractor will use Purchase Description ATPD 2241 for developing and maintaining EPDS. The format and content of Shipment and Storage Instructions shall be IAW MIL-STD-3003. The Contractor shall submit TACOM approved Equipment Preservation Data Sheets for Shipment and Storage (EPDS) IAW CDRL A008, DI-PACK-80121B.

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C.2.3.7 Validation Testing of Preservation Processing and Packaging. The Contractor shall validate packaging for Select and Special group items IAW Appendix F of Standard Practice for Military Packaging MIL-STD-2073-1C. The Contractor shall submit, in Contractors format, a report with each packaging data entry.

C.2.3.8 New and Revised EPDS. The Contractor shall develop a validation testing proposal for each new and revised EPDS. The Contractor shall schedule and provide AMSTA-TR-E/MTV a 30 day advance notice of validation testing on each EPDS. The Contractor shall validate each new and revised EPDS IAW the TACOM approved validation testing proposal. The Contractor shall submit, in Contractors format and IAW CDRL A008, DI-PACK-80121B.

C.2.3.9 Status Reports. The Contractor shall develop and maintain a status report of packaging data. The Contractor shall use TACOMs Packaging Data Status Report and current provisioning records to establish the status of an items packaging and avoid duplication of effort.

For each drawing part number, the Contractor shall develop the following status listings that shall contain: Commercial and Government Entity (CAGE); Source Maintenance and Recoverability (SMR) code; Item Name (NAME); National Stock Number (NSN); Inventory Control Point (ICP); Packaging Indicator Code (PIC); Local Control (LOC CONT); Date (MMDDYY) of latest packaging document (DATE).

1. An Item Status Listing containing the drawing (part) number (listed in part number sequence) with cross-reference to the primary provisioned part number in the notes.

2. Engineering Change Listing of each VECP/ECP.

3. A Provisioning Change Listing of items affected by a change to the items SMR code, Unit of Issue (UI), Unit of Measure (UM), or Unit Measure Quantity (UMQ).

The Contractor shall update the listings and develop summary of common group, selective group, special group items, items with current and estimated packaging data, and the total number of provisioned items.

Status reports shall be sent quarterly in Contractor's format and IAW CDRL A008.

C.2.3.10 Program Schedule. The Contractor shall determine and update program organization. The Contractor shall provide and maintain program information related to test and development equipment. The Contractor shall develop and maintain a plan for access to the parts needed for packaging development. The Contractor shall develop and maintain a schedule for preservation processing and packaging development to include milestones for developing: Packaging Data Entry, Special Packaging Instructions, Shipment and Storage Instructions, Validation Test Reports, Status Reports, Item Description Reports, and Long Life Returnable Container Development Records. The Program Schedule shall be submitted quarterly in Contractors format and IAW CDRL A008.

C.2.3.11 Long Life Reusable Containers (LLRC). The Contractor shall maintain and update the existing technical data package (TDP) for LLRC shipping containers for Government directed initiatives. Updates to the TDP shall include validation testing which establishes the capability of the LLRC to protect the integrity and serviceability of the item for which the container is designed. The Contractor shall maintain engineering drawings and associated lists to describe the form, fit, and function of each LLR container. Drawings shall be sufficient to permit competitive procurement of the LLRC. The Long Life Reusable Container Development Records shall be in Contractors format. The updated drawings shall be submitted IAW CDRL A008, DI-PACK-80121B.

C.2.3.12 Hazardous Material Data. A copy of hazardous material data sheet shall be provided for use in packaging development. The format and content of the hazardous material data sheet shall be IAW 10.2.5b of Data Item Description DI-SAFT-80102B (CDRL A009).

C.2.3.13 Parts Standardization Plan

C.2.3.13.1 The Contractor shall prepare a Parts Management Plan IAW CDRL A010, DI-MISC-80526. For guidance in preparing a plan, the Contractor may use MIL-HDBK-512 AND SD-19.

C.2.3.13.2 The Contractor shall select parts and conduct a parts management program, IAW the Contractors standard procedures, which assures the equipment (or system) meets the specification performance requirements with the greatest Improved Operational Effectiveness (described as function of performance, reliability, availability, and life cycle costs).

C.2.3.13.3 The Acquisition Activity will conduct semiannual reviews of the parts program to assess conformance to internal procedures, application of parts for meeting system Improved Operational Effectiveness, and parts problem areas.

C.2.3.13.4 Within 90 days after contract award, the Contractor shall submit a copy of their Parts Management Plan which may include documented internal procedures as set forth in DI-MISC-80526, CDRL A010.

C.2.3.13.5 The Contractor may request parts selection and application advice from the Acquisition Activity and/or the Military Parts Control Advisory Group (MPCAG).

Name of Offeror or Contractor:C.2.3.14 Specifications and Standards:

C.2.3.14.1 Specifications and standards shall be considered and selected in the following order of preference:

(1) Commercial (non-Government) specifications and standards (such as SAE ASTM, ANSI, IEEE, etc.)

(2) Performance-based specifications. Government specifications shall be in a performance-based format (i.e., form, fit, function, performance, and interfaces), without stating methods for achieving desired results.

(3) Military-unique or detail specifications and standards, but if selected, full justification must be given as to the reason(s) that a non-Government document or a performance specification cannot be used. In this case, a waiver must be obtained by the Government (TACOM).

NOTE: Use of Non-Government Specifications / Standards and / or commercial components shall not in any way degrade Vehicle System performance.

C.2.3.14.2 When specifications or standards, other than non-Government documents, are required to be prepared, the following formats shall be used: 1) Specifications shall be in book form IAW MIL-STD-961, 2) Standards and handbooks shall be in a book form IAW MIL-STD-962, 3) Specifications, standards, and handbooks prepared shall assure that they do not restrict or preclude competition.

C.2.3.14.3 The Contractor shall submit a draft of any proposed specification or standard to the Government for review. An annotated copy will be returned to the Government for amendment of the proposed standardization document prior to submission of the final copy.

C.2.3.14.4 The revised standardization document(s) will be submitted IAW CDRL A011, DI-SDMP-80579, for final review and approval. The document shall incorporate all the changes and corrections generated by the review and evaluation of the previous draft. The final submission shall be provided electronically in *.pdf format.

C.2.3.14.5 In all instances, the Government shall have final format approval authority, which would include assignment of the document identifier.

C.2.3.14.6 The application of specifications, standards, and related documents shall be limited to documents specifically cited in the contract as requirements, and to specified portions of documents directly referenced therein (first tier references). All other referenced documents (second tier and below) shall be for guidance only, unless specifically cited in the contract.

C.2.4 Environmental, Safety and Energy Standards and Regulations

C.2.4.1. The Contractor shall comply with all federal vehicle safety, noise and emissions requirements and standards, hereinafter referred to as requirements, affecting the supplies to be delivered IAW ATPD 2131C, Attachment 1 and in effect at the time of contract award. The FMTV trucks shall, however, comply with Environmental Protection Agency (EPA) emission regulations/standards for new motor vehicles and new motor vehicle engines in effect for calendar year 2004 at time of award with the exception of the XM1140 HIMARS Launcher Chassis.

C.2.4.2 In the event any of the foregoing requirements are changed after award, but compliance is optional on the part of the Contractor, the Contractor shall promptly notify the Government in writing, and the PCO shall have the right to elect whether the supplies yet to be accepted and delivered to the Government shall incorporate the optional changes or not. After receipt of this written notice, the PCO shall provide timely written advice to the Contractor of the Government's election and, if applicable, the effective date of such change(s). If the PCO's election hereunder constitutes a change which causes an increase or decrease in the cost of or time required to perform the contract, Contractor compliance shall be subject to equitable adjustment pursuant to the Changes clause of this contract. Any change to the trucks mandated by post award changes in law or regulation that had not been scheduled to take effect during the term of the contract at the time of contract award shall be subject to an equitable adjustment.

C.2.4.3 Safety Engineering. The Contractor shall integrate system safety engineering into system design efforts. The Contractor shall address the safety and health requirements of the ATPD 2131C, Attachment 1, in the technical reviews. System design and operational procedures developed by the Contractor shall consider but not be limited to the following:

a. Identifying hazards associated with the system by conducting safety analyses and hazard evaluations. Analysis shall include both operational and maintenance aspects of the vehicle along with potential interface problems with planned subsystems.

b. Eliminating or reducing significant hazards by appropriate design or material selection.

c. Controlling or minimizing hazards to personnel that cannot be avoided or eliminated.

d. Locating equipment components and controls so that access to them by personnel during operation, maintenance or adjustments shall not require exposure to hazards such as high temperature, chemical burns, electrical shock, cutting edges, sharp

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points, or concentrations of toxic fumes above established threshold limit values. All moving parts, mechanical power transmission devices, exhaust system components, pneumatic components and hydraulic components, which are of such a nature or so located as to be a hazard to operating or maintenance personnel, shall be either enclosed or guarded. Protective devices shall not impair operational functions.

e. Assuring that suitable warning and caution notes are included in instructions for operation, maintenance, assembly and repair and distinct markings placed on hazardous components of equipment.

f. Ensuring that safety is considered for both operational and maintenance phases of the system.

C.2.4.3.1 System Safety Program. To assure the safety objectives are achieved, the Contractor shall implement a System Safety Program.

C.2.4.3.2 Hazard Identification. The Contractor shall provide information concerning identified hazards to the Government at IPT/System Safety Working Group Meetings so they can be entered into the Government Hazard Tracking System. As a minimum, the following information should be provided for each hazard:

- a. Description of each hazard, to include cause, possible effect, hazard category
- b. Status of each hazard
- c. Proposed corrective action

C.2.4.3.3 Safety Assessment Report (SAR)

C.2.4.3.3.1 As a result of safety analyses, hazard evaluations, and independent Contractor testing, the Contractor shall prepare a Safety Assessment Report. The safety assessment shall identify all safety features of the hardware, software, system design and inherent hazards and shall establish special procedures and/or precautions to be observed by Government test agencies and system users. The SAR will be prepared IAW CDRL A009, DI-SAFT-80102B.

C.2.4.3.3.2 A draft SAR shall be submitted 120 days prior to delivery of hardware to the Government for test. The final SAR shall be submitted 30 days after Government review of the draft. The final SAR is subject to approval by the Government.

C.2.4.3.3.3 In the event the system is modified or procedural changes made after the final SAR is submitted, the Contractor shall update the SAR to reflect those modifications or changes.

C.2.4.4. Radioactive Material. Radioactive material shall not be utilized in the equipment supplied to the Government under this contract.

C.2.4.5. Health Hazard Assessment (HHA). The Contractor shall prepare a Health Hazard Assessment Report and incorporate the HHA into the SAR as an addendum. A health hazard is defined in DI-SAFT-80102B. In preparing the health hazard portion of the SAR, the Contractor shall provide a description and discussion of each potential or actual health hazard issue of concern for each subsystem or component. The Contractor shall include classification of severity and probability of occurrence, and when the hazards may be expected under normal or unusual operating or maintenance conditions. The Contractor shall make recommendations for the identified health hazards concerning engineering controls, equipment, and/or protective procedures, to reduce the hazard to an acceptable risk. Issues to be addressed within the report shall include but not be limited to:

- a. Noise.
- b. Toxic Gases.
 - (1) Carbon Monoxide.
 - (2) Ammonia.
 - (3) Oxides of nitrogen and sulfur.
 - (4) Acrolein.
- c. Toxic Chemicals.
- d. Ionizing or non-ionizing radiation.
- e. Heat and Cold (to include heat stress).
- f. Shock and vibration to crew members.
- g. The chemicals identified in the Materiel Safety Data Sheets to be provided in the SAR (DI-SAFT-80102B).

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C.2.4.6.1 Unless written authorization is obtained beforehand from the PCO, the Contractor shall not use cadmium, hexavalent chromium, Class I or Class II ozone-depleting chemicals (ODCs), or other highly toxic or carcinogenic materials in the manufacture and assembly of FMTV-family of vehicles. The Contractor shall not use materials that are identified in the Registry of Toxic Effects of Chemical Substances, published by the National Institute for Occupational Safety and Health, as materials that will produce toxic effects via respiratory tract, eye, skin or mouth. Moderately toxic materials may be used, provided the design and control preclude personnel from being exposed to environments in excess of the specified in 29 CFR 1910, Occupational Safety and Health Standards. ****

C.2.4.6.2 Government TDP. The Contractor shall review the Government-furnished Technical Data Package and shall identify any uses of the prohibited materials identified in C.2.4.6.1 in writing to the Procuring Contracting Officer. This information will be included with CDRL A012 submission requirements. The Contractor's written notification shall identify the part/drawing affected, the prohibited substance, shall recommend alternative environmentally-friendly materials, and shall furnish engineering documentation to substantiate any performance variation between the item made of the prohibited material and the item made with the alternative material. Within 15 days of receipt of the PCO's determination letter, the Contractor shall submit an Engineering Change Proposal to replace the item made of the prohibited material with that identified in the PCO's determination letter.. ****

C.2.4.7. Hazardous Materials Management Program (HMMP). The Contractor shall establish, implement and maintain a Hazardous Materials Management Program using National Aerospace Standard 411 (NAS 411) "Hazardous Materials Management Program" as a guide. The purpose of this program is to eliminate or minimize (where elimination is not possible) hazardous and environmentally unacceptable materials throughout the life cycle of the system to ensure protection of human health and the environment. The Contractor shall prepare a Hazardous Materials Management Program Plan which, at a minimum, shall identify and describe the organizational relationships and responsibilities for eliminating hazardous materials, define the process used to identify the hazardous materials utilized in the manufacturing process, and establish prioritization criteria for ranking the relative risks of these hazardous materials. This Plan shall be submitted following the outline contained in NAS 411 paragraph 4.4 per DI MGMT-81398, CDRL A012. The Contractor shall submit the Hazardous Material Management Reports following the outline contained in NAS 411 per paragraph 4.4 per DI-MGMT-81397, CDRL A013. The plan and report shall address all process used in the production of the FMTV-family of vehicles, to include vehicle storage after production, and the management of waste and storage/disposal of scrap material generated by the program. The plan and report shall also identify all hazardous materials required for system production, a listing of prioritized hazardous materials for minimization/elimination per the criteria established in the Hazardous Materials Management Plan, and identify those hazardous materials/processes for which non-hazardous substitute materials/technologies may be available for implementation.

C.2.5 Government Testing Requirements.C.2.5.1 First Article Requirements

C.2.5.1.1 First Article Requirements under this contract consist of the following:

- a. First Production Vehicle Inspection (FPVI).
- b. Production Verification Test (PVT).
- c. Component First Article Tests (CFAT).

C.2.5.1.2 First Article Approval--Government Testing (FAR 52.209-4 Deviation

a. The Contractor shall deliver First Article Test (FAT) vehicles IAW this contract. The shipping documentation shall contain this contract number and the vehicle identification number.

b. Within 120 calendar days of completion of all First Article Tests for each model (see paragraph C.2.5.1.1), the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval. The Government, at its discretion, may approve the FAT by model, separately.

c. If the first article test(s) is disapproved for not meeting the performance requirements of the ATPD 2131C, Attachment 1, the Contractor, upon Government request, shall submit additional first article vehicles and support, in the same level and manner as the original FAT, for testing at no additional cost to the Government. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article vehicle or select another first article vehicle for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests and vehicles

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following disapproval of tests attributed to Contractor configuration as described in C.1.2.5 or interface deficiencies. The Contractor shall furnish any additional first article test items to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time specified in paragraph (b) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional cost to the Government related to these tests.

d. If the Contractor fails to deliver any first article vehicles on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the DEFAULT clause of this contract.

e. If the Government does not act within the time specified, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the CHANGES clause of this contract the delivery or performance dates and/or the contract price, and any other contractual terms affected by the delay.

f. The Contractor is responsible for providing operating and maintenance instructions and spare parts support during any first article test.

g. Before first article approval, the Contracting Officer may, by written authorization, authorize the Contractor to acquire specific materials or components or to commence production to the extent essential to meet the delivery schedules. If first article tests reveal deviations from contract requirements, the Contractor shall make the required changes or replace all items produced under this contract at no change in the contract price.

C.2.5.2 First Production Vehicle Inspection (FPVI)

C.2.5.2.1 The Government shall select 1 of each model (except for the chassis) for FPVI. The vehicles selected shall be subjected to inspections by both the Contractor and the Government IAW clauses of the contract and the ATPD 2131C, Attachment 1 FMTV System Specification. The FPVI shall be initiated at least 30 days prior to the start of the PVT and shall be completed prior to the shipment of the PVT vehicles to the Government test sites. FPVI shall be considered part of the First Article requirement (Paragraph C.2.5.1.1) of this contract. The Contractor shall notify the Administrative Contracting Officer (ACO) and TACOM, in writing at least 45 calendar days prior to said inspection stating the time and location. At the time of said inspection, the Contractor shall make available to the Government representatives, all records of prior inspection, tests, Qualified Product List (QPL) documentation, vendor quality requirements, drawings, and certifications.

C.2.5.2.2 The Contractor shall prepare a FPVI report for each model (except for the chassis) IAW DID DI-NDTI-80809B (CDRL A014). The Contracting Officer shall, by written notice to the Contractor within 20 calendar days after receipt of the Inspection Report, conditionally approve, or disapprove, each first production vehicle. Final approval shall not be made by the Government until satisfactory completion of the PVT portion of the First Article Test (paragraph C.2.5.3 of this contract) for those vehicle types. A notice of conditional approval shall state any further action required of the Contractor for the applicable first production vehicle or subsequent vehicles. A notice of disapproval shall cite reasons therefore.

C.2.5.2.3 If the FPVI is disapproved by the Government, the Contractor may be required, at the discretion of the Government, to repeat any or all of the FPVI. After notification of the additional inspections, the Contractor, at no increase in contract price, shall make any necessary changes, modifications, or repairs to the first production vehicles. The Government has the discretion to select another production vehicle for FPVI in lieu of the original first production vehicle. Upon completion of additional inspection, the Contractor shall again submit an inspection report. The Contractor shall bear the responsibility for delays resulting from additional FPVI. All discrepancies found during FPVI shall be corrected on the FPVI vehicles prior to start of PVT.

C.2.5.3 Production Verification Test (PVT)

C.2.5.3.1 The PVT shall be conducted by the Government at Government selected test sites IAW ATPD 2131C, Attachment 1. The vehicle models for testing are identified below. A schedule of major contract dates is in Section F. Delays caused by test vehicle breakdown(s) due to poor vehicle quality or workmanship, or failure of the Contractor to provide adequate test support IAW contractual requirements, or failure of the Contractor to comply with the vehicle specification technical requirements shall not be the basis for adjustment of the contract delivery schedule or the contract price.

C.2.5.3.2 Requirements Applicable to Production Verification Test

a. The test vehicles, representative of the production deliveries, shall be furnished to the Government test site(s) listed in the respective paragraphs. Transportation charges from the Contractor's plant to and from the test sites shall be the sole responsibility of the Contractor.

b. Under no circumstances shall any test vehicle be shipped from the Contractor's facility to the test sites until:

(1) A complete inspection has been performed on each vehicle by a Government team consisting of a formally designated representative of the ACO or a designated TACOM representative.

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(2) All deficiencies disclosed by this Government inspection have been corrected by the Contractor and approved by the Government, as evidenced by the DD Form 250, signed by an authorized Government representative before shipment.

C.2.5.3.3 The Government will provide 1 Phase I MTV Cargo w/MHE as GFP to the Contractor within 60 days after contract award. The Contractor shall upgrade the vehicle to FPVI electrical/software configuration, with production representative hardware to the maximum extent possible, and ship the vehicle to White Sands Missile Range (WSMR) for Electromagnetic Emissions/Electromagnetic Interference (EME/EMI) and High Altitude Electromagnetic Pulse (HAEMP) testing 120 days after contract award. The Contractor provide a written notification of the configuration of the vehicle to the Government at the Start of Work meeting. Transportation charges from the Contractor's plant to and from the test sites shall be the sole responsibility of the Contractor. The Government will perform testing and complete the testing within 90 days after vehicle delivery to the test site. Changes to the vehicle configuration to correct test deficiencies shall be the responsibility of the Contractor and shall be incorporated in all production vehicles starting with FPVI Part 1 vehicles.

C.2.5.3.4 At the conclusion of the Aberdeen Test Center (ATC) testing identified below, 1 - LMTV cargo truck with trailer and 1 - MTV cargo truck with trailer shall be shipped to the U.S. Army Defense Ammunition Center and School (USADACS), in McAlester, Oklahoma, by the Contractor for Ammunition Certification testing IAW Annex A, para. A.2, as directed by ATPD 2131C, Attachment 1. The Contractor shall assure the vehicles and trailers are fully operational and reflect the latest vehicle/trailer configuration prior to shipment.

Specific vehicle delivery requirements for PVT Testing are set forth below:

PVT TEST VEHICLE REQUIREMENTS

MODEL		KITS	QTY	MILEAGE	TEST SITE	TEST TYPE	
<u>PVT 1:</u>							
M1078A1	LMTV CARGO w/w	A, B, C & F	1	20,000	ATC	RAM-D	
M1078A1	LMTV CARGO	B	2	As req	ATC	RAM-D/PERF	***
M1083A1	MTV CARGO	B, F, & N	1	20,000	ATC	RAM-D	
M1083A1	MTV CARGO	B, C, G, H & J	2	As req	WES/ATC	RAM-D/PERF	***
M1088A1	TRACTOR		1	20,000	ATC	RAM-D	
M1088A1	TRACTOR		1	As req	ATC	RAM-D/PERF	*
M1084A1	MTV CARGO w/MHE	I, O	1	As req	ATC/WSMR/YPG	PERF	*
M1079A1	LMTV VAN	K & L	1	20,000	ATC	RAM-D	
M1082	LMTV Trailer		1	12,000	ATC	RAM-D/PERF	
M1095	MTV Trailer	M	1	12,000	ATC	RAM-D/PERF	
<u>PVT 2:</u>							
M1089A1	WRECKER	E	1	12,000	ATC	RAM-D	
M1089A1	WRECKER	D & E	1	As req	ATC	RAM-D/PERF	
<u>PVT 3:</u>							
XM1087A1	EXPANSIBLE VAN		2	20,000	ATC	RAM-D/PERF	
<u>PVT 4:</u>							
M1090A1	Dump	C,D	2	20,000	ATC	RAM-D/PERF	*

TEST VEHICLE KIT KEY

- (A) LMHC KIT (One (1) LMTV Only) (Provided by Government to test site and installed by Government at test site)
- (B) MACHINE GUN RING MOUNT KIT (GFE provided to Contractor for installation at the Contractor's facility)
- (C) TROOP SEATS (Purchased under this contract and installed by Contractor)
- (D) ARCTIC KIT (Purchased under this contract and installed by Contractor)
- (E) ROTATING AMBER LIGHT KIT (Provided by Government to test site and installed by Government at test site)
- (F) Softtop Cargo Cover Kit (Provided by Government to test site and installed by Government at test site)
- (G) S280 Tiedown Kit (Provided by Government to test site and installed by Government at test site)
- (H) TPU Tiedown Kit (Provided by Government to test site and installed by Government at test site)
- (I) Digitization Kit (Provided by Government to test site and installed by Government at test site)

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- (J) 500 Gal Drum Tiedown Kit (Provided by Government to test site and installed by Government at test site)
- (K) LMTV Van Heater Kit (GFE provided to Contractor for installation at the Contractor's facility)
- (L) LMTV Van A/C Kit (GFE provided to Contractor for installation at the Contractor's facility)
- (M) PU Tiedown Kit for Trailer (Provided by Government to test site and installed by Government at test site)
- (N) 200 Amp Alternator Kit (GFE provided to Contractor for installation at the Contractor's facility)
- (O) SINCARS Radio Kits (Provided by Government to test site and installed by Government at test site)

C.2.5.4 Optional Testing

C.2.5.4.1 Cold Regions Arctic Testing - See Section H.9 Optional Testing

C.2.5.4.2 Mobility Testing - See Section H.9 Optional Testing

C.2.5.4.3 Accelerated Corrosion Test (ACT) - See Section H.9 Optional Testing

C.2.5.4.4 Follow-on Production Testing (FPT) - See Section H.9 Optional Testing for PY2-5

C.2.5.4.5 Reserved. **

C.2.5.4.6 Reserved. **

C.2.5.4.7 Limited User Test (LUT) for MTV Cargo, LMTV Cargo and MTV Wrecker - See H.9

C.2.5.5 Course Profiles. The Government intends to conduct the majority of actual Reliability, Availability, Maintainability-Durability (RAM-D) test miles on the courses identified below for PVT and FPT. The vehicles shall be complete vehicles, loaded, serviced and fueled as specified in ATPD 2131C, Attachment 1. However, the Government reserves the right (at its discretion) to test on different courses as long as they are at a level equal to or less than that specified below, as dictated by the availability of test facilities or other program considerations. The Government also reserves the right to test on any of the courses listed for a group or any combination of courses within a group. Test courses selected are considered representative of actual terrain profiles and shall be successfully negotiated by the candidate vehicles provided. Unless otherwise specified, performance shall be demonstrated on the profiles as set in Tables VI through XII of ATPD 2131C, Attachment 1. Roads and courses are defined as follows:

a. Primary Roads - Specified test mileage shall be performed on the courses known as Aberdeen Test Center (ATC) Perryman Test Area (PTA) Paved and Yuma Proving Ground (YPG) Dynamometer Course.

b. Secondary Roads - Specified test mileage shall be on the courses known as ATC PTA- 1 Course, ATC PTA-A Course, ATC Churchville Test Area (CTA)-C Course and ATC Munson Test Area (MTA) Belgian Block and ATC MTA-Gravel and YPG Old Highway 95.

c. Cross Country - All specified test mileage shall be performed on the courses known as ATC PTA-3 Course and YPG Truck Level, High Hills and Rolling Hills Cross Country Courses.

d. Trails - Specified test mileage shall be performed on the courses known as ATC PTA-2 Course and ATC CTA-B Course and YPG Rock Ledge and Middle East Courses.

C.2.5.6 System Support Package (SSP)

C.2.5.6.1 System Support Package List (SSPL) - The Contractor shall prepare and provide a SSPL by e-mail, in Contractor format, for each test required to the Government 60 days prior to delivery of vehicles to Government test sites IAW CDRL A015. The SSPL shall define the required support elements, including all spare parts required, technical representatives, parts storage containers or trailers required, technical manuals and other items that are required to successfully complete testing.

C.2.5.6.2 System Support Package - The Contractor shall assemble, furnish and ship (to include packing, packaging and transportation) the SSP to each designated test site 30 days prior to the start of a test. The SSP shall consist of items listed on the SSPL, but is not limited to, the following:

- a. Parts/Items for services and repairs.
- b. Peculiar/common/special tools and Test, Measurement, and Diagnostics Equipment (TMDE).
- c. Training and support of test site personnel.
- d. Personnel requirements quantity by Military Occupational Specialty (MOS)
- e. Basic Issue Items (BII)

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- f. List and quantity of expendable supplies such as Petroleum, Oil and Lubricants (POL)
- g. Technical manuals, in draft format with updates as required.

C.2.5.6.3 Replacement Items - Replacement items required to continue testing, which were not identified or furnished with the SSP or were not furnished in sufficient quantities, shall be provided by the Contractor within 24 hours after notification of the shortage (72 hours for Alaska).

C.2.5.6.4 Tools and Test Equipment - The Contractor shall identify and utilize existing Government tools and test equipment to the maximum extent feasible.

C.2.5.7 Contractor Test Support

C.2.5.7.1 The Contractor shall be responsible for furnishing repair parts and technical support during PVT for the vehicles at all the Government test sites identified in C.2.5.3 of this contract.

C.2.5.7.2 Contractor technical support shall include technical representation at the Government test site throughout the test period. The Government will provide storage facilities for Contractor furnished repair parts at the test site.

C.2.5.7.3 The Contractor shall provide field service representatives at all Government test sites who shall advise and make recommendations to orient and instruct key Government personnel with respect to operations, maintenance, repair and parts supply for the equipment furnished under this contract. When requested by the Government, the Contractor shall perform all general support and depot maintenance level of repair at each test site.

C.2.5.7.4 The Contractor shall provide the Government data collector any errors/inconsistencies discovered in technical manuals or publications during this maintenance.

C.2.5.8 Test Deficiencies/Failures

C.2.5.8.1 A failure is defined as the condition of not achieving the desired end/requirement, i.e. an event, or state, in which a system or a component does not perform as specified in the ATPD 2131C, Attachment 1 and TDP as described in C.1.2.5.

C.2.5.8.2 A deficiency is defined as a condition that lacks an essential quality or element and may be used synonymously as a failure.

C.2.5.8.3 In the event of a vehicle/component test failure, the Government reserves the right to retest the vehicle/component upon correction of the failure by the Contractor to the complete extent and duration specified in the test program, or to such lesser extent as the PCO shall consider appropriate in his/her sole discretion. The Contractor shall be responsible for delays in the program test period resulting from vehicle/component failures and for failing to adequately or timely furnish parts support. The Government shall have the right to extend the specified program test period accordingly at no increase in contract price.

C.2.5.8.4 The Contractor, when directed by the PCO, shall correct on-site any failure of the system, which occurs during testing. Delays caused by defective test items shall not be a basis for adjustment of the contract delivery schedule or the contract price.

C.2.5.8.5 Deficiencies found during or as a result of First Article Testing, shall be prima-facie evidence that all vehicles/components already produced prior to completion of First Article are similarly deficient. Such deficiencies on all vehicles/components shall be corrected by the Contractor at no additional cost to the Government except for legacy deficiencies as defined in paragraph C.2.5.9.10.1.

C.2.5.9 TEST INCIDENT REPORTS/FAILURE ANALYSIS & CORRECTIVE ACTION REPORT

C.2.5.9.1 The Contractor shall be responsible for accessing the test site computer databases, i.e. Versatile Information Systems Integrated On-line Nationwide (VISION)/ Army Test Incident Reporting System (ATIRS), for all Test Incident Report (TIR) data during Government-required tests. Receipt of a TIR is defined as the day the TIR is posted to the database (TIR Release Date). Upon receipt of a TIR, the Contractor shall determine the root cause of the failure and furnish a Failure Analysis and Corrective Action Report (FACAR) with the proposed corrective actions set forth in this contract provision. The FACAR (i.e. Section VI of the TIR) shall be prepared by the Contractor in the ASCII format Corrective Action data stream identified at Attachment 10 of the contract and as described in the DI-RELI-81315 (T) (CDRL A016). ***

C.2.5.9.2 No Contractor entries are required in data blocks 102, 103, 104, and 105. The first Contractor entry for each FACAR shall record OPEN in data block 100. No subsequent changes should be made to data block 100. Responses to data blocks 120-123 shall also include the data identified in DI-RELI-81315 (T). With the exception of the supporting documents, all required text shall be submitted to VISION/ATIRS through the ASCII ***

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format Corrective Action data stream. ***

C.2.5.9.3 SUPPORTING DOCUMENTATION - The Contractor shall provide Supporting Documentation (internal assessment, supplier data/vendors analysis, test data, certifications, drawings, digital photographs, etc) for each FACAR IAW CDRL A016. The Supporting Documentation shall be submitted in *.pdf format in conjunction with the ASCII Corrective Action data stream. To track multiple source documents related to a single FACAR, the file name shall be composed of a sequential FACAR numbering system [FACAR # - Version # .pdf]. ***

For Example:
L5XXXXXXXXXX-A.pdf ----- 1st document ***
L5XXXXXXXXXX-B.pdf ----- 2nd document ***
L5XXXXXXXXXX-C.pdf ----- 3rd document ***

For FACAR revisions, data blocks shall list any additional Supporting Documentation with the new file name. ***

C.2.5.9.4 The Contractor shall access the VCLS and ATIRS/VISION System for TIRs and Corresponding FACAR submissions prior to the first scheduled CARB to assure system compatibility and smooth processing of emailed data deliverables. ***

C.2.5.9.5 INTERIM FACARS - Interim FACARS shall be provided by the Contractor within the following specified time frames: ***

- a. Critical Defect - 48 hours after the TIR Release Date. ***
- b. Major Defect - 20 calendar days after the TIR Release Date. ***
- c. Minor Defect - Optional. ***
- d. Informational - N/A. ***

The Interim FACAR shall be submitted in the ASCII format Corrective Action Data Stream as identified at Attachment 10 of the contract. Each applicable Data Block shall retain the following structure: ***

- a. 1st line - Current Date/Name of team member generating the response ***
- b. 2nd line - Source Document file name per C.2.5.9.3 ***
- c. 3rd line - Relevant content/date of the latest Government CARB Notification (if provided) ***
- d. 4th line - Content as described in C.2.5.9.1 ***
- e. Last line - "Action Complete" ***

C.2.5.9.5.1 The Interim FACAR shall include the following content: ***

- Data Block 120: Developer's Analysis of the Problem. ***
- 1. Disposition of failed item. ***
 - 2. Statement as to whether this is a pattern failure (if so, the reports of the other failure(s) shall be referenced). ***
 - 3. Classification failure (independent or dependent). ***
 - 4. Failure symptoms. ***
 - 5. Failure mode. ***
 - 6. Failure analysis methods to include a preliminary investigation and analysis of each failed test exhibit at a level necessary to identify possible root causes, mechanisms, and potential effects of that failure on the system. ***
 - 7. Status of the Contractors preliminary investigation and any supplemental information related to the failure (i.e., any internal contractor assessments, records, reports, correspondence, etc.). ***

C.2.5.9.5.2 If the Government CARB determines that the Interim FACAR does not meet the above criteria, the Government CARB will notify the Contractor. The Contractor shall address the stated deficiencies in the Final FACAR. ***

C.2.5.9.6 FINAL FACARS - For TIRs where an Interim response is required (Critical/Major) but not submitted within the specified time frame, a Final FACAR is due within 45 calendar days after receipt of the Interim FACAR. For TIRs where an Interim response is optional (Minor), a Final FACAR is due within 45 days after the TIR Release Data regardless of an Interim FACAR submittal. ***

The Final FACAR shall be submitted in the ASCII format Corrective Action Data Stream as identified at Attachment 10 of the contract. All Data Blocks shall retain the following structure: ***

- a. 1st line - Current Date/Name of team member generating the response ***
- b. 2nd line - Source Document field name per C.2.5.9.3 ***

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classification (Critical, Major, Minor, Information) based on known test data and/or the quantity of TIRs for a particular failure mode (AR 73-1, DA PAM 73-1). The Government will notify the Contractor of the Scoring Conference results within 10 working days of the meeting through the PCO.

C.2.5.9.10.2 CARB Meetings. During and after Government testing, CARB meetings will be held to review the functional/performance failure data and corrective action status of all TIRs classified in block 32 of the TIR as Critical, Major, or Minor. The CARB will review the contents of CDRL A016 DI-RELI-81315(T) (primarily affecting blocks 100-123 of the TIR). FACARs submitted IAW C.2.5.9.1 through C.2.5.9.8 shall not conflict with Contractor submissions made at the Scoring Conference.

C.2.5.10 Test Vehicle Modifications

C.2.5.10.1 All desired changes to test vehicle hardware or software shall be initiated by a Test Work Authorization Document (TWAD). The Government will review and process this form within 2 working days after receipt. Once a modification has been validated during testing, the Contractor shall initiate Deviation IAW Section C.2.2.5.

C.2.5.10.2 The form shall be in Contractor format; a copy of which shall be provided to the TACOM Quality Assurance Representative IAW CDRL A017.

C.2.5.11 Component First Article Testing (CFAT). First Article Tests shall be required for all CFATs contained in the FMTV TDP as described in C.1.2.5 as well as the Component First Article Tests specified in the following contract clauses; clauses C.2.5.11.1 through C.2.5.11.10 shall apply to all CFATs contained in the FMTV TDP, Attachments 2 and 3.

C.2.5.11.1 The Contractor shall perform CFAT on the components and systems listed below. The Government reserves the right to be present at any such testing. The Contractor shall notify the Government a minimum of 20 days prior to conducting a test. Failure to notify the Government within the time limit may, at the Government's discretion, be grounds to reject the test. Where a system is referenced, the Contractor is responsible for conducting the test at the component part level; for example, Steering System requires component level testing of the steering pump, steering gear, steering column, steering wheel, steering shaft, steering assist cylinder, and damper shock, as a minimum. The test shall include a dimensional inspection that validates the component meets the level 2 drawing requirements. The approved CFAT procedures shall become the baseline test requirements of the Quality Assurance Provisions. During the Physical Configuration Audit, a complete review of Quality Assurance Provisions and associated requirements will be performed, if applicable. First Article Tests shall evaluate performance, durability, and environmental tests. Component First Article test items shall be listed on the Quality Engineering Planning List (QEPL) and shall be representative of items to be manufactured using the same process, facilities and procedures as will be used for contract production. The Contractor is responsible for all CFATs and notifying the Government of components requiring CFAT. It is the Contractor's responsibility to assure the QEPL is complete. Failure to submit a complete list and schedule to the Government will not relieve the Contractor of Component First Article Testing. Delays in schedule as a result of the Contractor's failure to identify the CFAT components requiring first article test will be the responsibility of the Contractor. The component First Article shall be inspected and tested to all requirements of the drawing(s), and specification(s) of the TDP (IAW C.1.2.5) and successfully complete CFATs.

- | | |
|--|-------------------------------------|
| (1) Engine | (18) Electrical Wiring System |
| (2) Transmission | (19) Control Station-Control/Gauges |
| (3) Transfer Case or Drop Box Assembly | (20) Suspension System |
| (4) Trailer Leg Mechanism | (21) Filter/Separator Assembly |
| (5) Steering System | (22) Starter |
| (6) Material Handling Equipment(s) | (23) Air Cleaner |
| (7) Cargo/Dump beds | (24) Fan, Cooling System |
| (8) Dump Body Hydraulics | (25) Fan, Clutch Drive |
| (9) Air, Hydraulic oil or fuel tanks/ reservoirs | (26) Radiator |
| (10) Fifth Wheel | (27) Engine After Cooler |
| (11) Propeller Shaft | (28) Transmission Oil Cooler |
| (12) Power Take-Off (PTO) Mechanism | (29) Cab |
| (13) Van Body | (30) Heater Assembly and Core |
| (14) Brake System | (31) Alternators |
| (15) Pressure Release Valve(s) | (32) Winches |
| (16) Wheels | (33) Van Heater |
| (17) Electronic Control for Engine,
Transmission, Central Tire Inflation
System, Anti-lock Braking System etc. | (34) Van Air Conditioner |

C.2.5.11.2 The Contractor shall specify the number of component units required to perform CFAT.

C.2.5.11.3 Component First Article Test Plan. The Contractor shall prepare and submit for Government approval, prior to the beginning of any CFAT, a recommended inspection plan for the first article item(s). CFAT shall be completed 30 days prior to the start of PVT. Individual First Article Test plans shall be submitted for Government review within 90 days after contract award IAW DID DI-NDTI-80566 (CDRL A018). The Government will have the right to monitor all CFATs. The Contractor shall provide a list and time schedule of CFATs as

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part of this plan, including anticipated completion dates.

C.2.5.11.4 CFAT Report. The Contractor shall submit all CFAT Report(s) within 60 days of CFAT completion. Reports shall be identified CFAT. The CFAT report(s) shall include part number drawings and Quality Assurance Provisions. The CFAT report shall be prepared IAW MIL-STD-831 and DID DI-NDTI-80809B (CDRL A014). CFAT reports shall contain a matrix summary which tabulates each test/inspection performed, results of each test (pass/fail), corresponding page where data is located, Contractor position and any corrective action, if required, shall be included in the report.

C.2.5.11.4.1 Conditional Acceptance of Components pending CFAT Completion. The Contractor can use components in the manufacture of FMTV vehicle production, pending successful completion of the CFAT for that component provided:

a. The Contractor agrees to successfully complete all of the CFAT tests.

b. The Contractor shall rectify all deficiencies/discrepancies in each component that are identified during the subsequent CFAT testing, regardless of the location of each component.

c. In the event that there is a CFAT failure during the period of time that the Contractor is authorized to use components, then the Government reserves its right to:

(1) Not accept, or cease acceptance, whether conditional or final, of vehicles

(2) Require the Contractor to repeat all, or a portion of, the PVT at the Contractor's expense

C.2.5.11.5 Disapproval. If the CFAT is disapproved, the Contractor, upon Government request, shall repeat any or all CFATs. After such request for additional tests, the Contractor shall make any necessary changes, modifications or repairs to the First Article or select another First Article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following disapproval. The Contractor shall then conduct the tests and deliver another report to the Government under the terms and conditions and within the time specified by the Government. The Government shall take action on this report within the time specified. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional costs to the Government resulting from these tests.

C.2.5.11.6 Changes. If changes are made to the technical data, production processes, facilities, and/or type of material, a subsequent CFAT may be required, as determined by the Government. When either of the above conditions occur, the Contractor shall notify the PCO/ACO so that instruction for the submission, inspection and notification of results can be made. Costs of CFATs resulting from Contractor proposed technical data changes, production process change or material substitution shall be borne by the Contractor.*

C.2.5.11.7 Manufacture. The Component First Article offered for test(s) must be manufactured at the facilities in which that item(s) is to be produced under the contract. If the First Article is a component not manufactured by the Contractor, the component must be manufactured at the same facilities in which the component is to be produced for the contract. A certification by the Contractor to this effect must accompany each CFAT which is offered. In the event CFAT reveals deviations from contract requirements, the Contractor shall, at the location designated by the Government, make the required changes to the items, or replace all the items manufactured under this contract, at no change in contract price.

C.2.5.11.8 If not specified otherwise in the applicable specification or Quality Assurance Provisions or elsewhere in this clause, the First Article shall be taken from the first 10 units produced for this contract. In the event that the first 10 units of a lot are not available, the Government reserves the right to select the CFAT quantity from any lot..

C.2.5.11.9 Subcomponent First Article Test requirements may be met during the performance of the First Article Test of a higher assembly, only if the required characteristics can be tested. If any characteristic of the subcomponent is not or cannot be tested during the higher assembly testing, the subcomponent shall be tested separately.

C.2.5.11.10 Reserved.

C.2.5.11.11 Component First Article Conditions. The CFAT requirement is considered to be met if the Contractor certifies that (1) the supplier has component First Article Approval on the identical part delivered for use in a previous vehicle production contract with the Government and (2) the supplier has been a continuous supplier of the part (for purposes of this clause, a continuous supplier is defined as one which has not had a break in production in excess of one year, and the design and manufacturing/assembly process or place of manufacture have not been changed). If military/federal specifications are applicable to the component and changes to these documents have been implemented which may impact form, fit, function or performance, a First Article Test shall be accomplished. Further, if degradation of performance of the component is evident, as determined by the Government, a First Article Test will have to be accomplished.

C.2.5.12 Disposition of All Test Vehicles/Kits (including optional testing). Following successful completion of testing, the Government may elect to have specific test vehicles or kits refurbished at Government expense.

CONTINUATION SHEET

Reference No. of Document Being Continued

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C.2.5.13 Follow-On Production Testing (FPT). The FPT will be conducted IAW ATPD 2131C, Attachment 1, Section 4, paragraph 4.6- See Section H.9 Optional Testing

C.2.5.14 Control Tests. The control test will be conducted IAW ATPD 2131C, Attachment 1, Section 4, paragraph 4.5.

C.2.5.15 Limited User Test (LUT) for Expansible Van and Dump Models. The Government will be conducting a separate LUT for the Expansible Van and Dump Models. Length of testing will be approximately 3 months for the Expansible Van and 1 month for the Dump. Testing for the Expansible Van will begin 30 days after completion of PVT. Testing for the Dump will begin 60 days after completion of PVT. The delivery requirements are specified below:

LUT Test Vehicle Requirements

MODEL	QTY	MILEAGE	TEST SITE	TEST TYPE
XM1087A1	2	1,000	Ft. Hood	RAM-D/Perf
M1090	2	1,000	Ft. Leonard Wood	RAM-D/Perf

The Contractor shall provide System Support Packages and Contractor Test Support IAW C.2.5.6 and C.2.5.7, TIR/FACAR and Test Vehicle Modification IAW C.2.5.9. and C.2.5.10. The test vehicles, representative of the production deliveries, shall be furnished to the Government test site. Transportation charges from the Contractor's plant to and from the test sites shall be the sole responsibility of the Contractor.

C.2.5.16 Physical Configuration Audits

C.2.5.16.1 Physical Configuration Audits (PCA) shall be performed by the Contractor and witnessed by Government personnel to validate the new hardware being introduced to the FMTV TDP, Attachments 2 and 3, utilizing Level 3 drawings of which ECPs have been approved by the Government. The PCA shall be based on each ECP. The accomplishment of the PCA shall follow the schedule delineated in the Government-accepted detailed Physical Configuration Audit Plan identified in paragraph C.2.5.16.2 and shall be conducted incrementally on the vehicle, its components and parts of components. The PCAs shall be completed no later than 120 days after delivery of PVT vehicles. Guidance for conducting the PCA is contained in Army Regulation 70-69 and MIL-STD -1521. *

C.2.5.16.2 The Contractor shall submit for Government approval, a detailed Physical Configuration Audit Plan, IAW DID DI-CMAN-80556A (CDRL A019). The PCA shall be phased to 90 days after each ECP is approved. Each PCA shall be completed within 90 days. Hardware delivered for the PCA shall be built to Level 3 drawings.

C.2.5.16.3 The PCAs will be performed on the items selected by the Government. The Government may, at its discretion, choose any drawing characteristics deemed necessary to verify during the PCA. The Contractor shall submit a comprehensive list of all current drawings which are contained in the TDP and which are representative of the configuration being audited. The list shall be provided to the Government 90 days before the start of the PCA. The Government will select a sample of parts from each increment as delineated in the Government- approved Configuration Audit Plan. The number of samples selected shall be IAW the following:

Number of Physical Configuration Audit Items on List or Engineering Change Proposals	Sample Size of Items for Inspection
0 to 8	5
9 to 25	9
26 to 50	13
51 to 90	16
91 to 150	20
51 to 280	32
281 to 500	50
501 to 1200	80
1201 to 3200	125

C.2.5.16.4 The Contractor shall provide notification to the PCO and the ACO not less than 21 days prior to the conducting of any audit. An agenda shall be provided IAW CDRL A020. The Government Quality Assurance Representative(s) shall be present in all cases. The Contractor shall also provide the PCO (concurrent with the agenda): (i) all first piece inspection reports; (ii) material, hardness and finish certifications; and (iii) all subassembly inspection/material, hardness and finish certifications.

C.2.5.16.5 All parts, assemblies, and subassemblies offered for PCA shall be produced using tooling, processing and inspection procedures that will be followed during production. Quality Assurance Provisions shall be audited to the extent possible to assure

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compatibility with the drawings.

C.2.5.16.6 If findings from a PCA disclose no difference between the PCA item, the Level 3 drawings, and related quality assurance technical data, the Contractor shall submit, for approval, a final PCA report, including the PCA Inspection Reports (see DID DI-CMAN-81022, CDRL A021 for guidance).

C.2.5.16.7 If deficiencies are found during the PCAs and these deficiencies exceed 5% of the total characteristics audited on any increment, the Contractor shall initiate corrective action and be required to provide objective evidence that similar trends do not exist on future submissions to the Government. Further, the Contractor shall be required to audit the entire drawing package/configuration item and correct all errors if deficiencies exceed 5% of the total characteristics on the Government selected parts. General characteristics such as component workmanship shall be counted as one (1) per component; i.e., poor soldering on a circuit card, or burns on a component, shall count as one (1) observation and/or one (1) deficiency. Drawing deficiencies such as spelling errors, drawing format deficiencies, and incorrect dimensioning practices shall be counted as one (1) defect per category; (i.e., a drawing with three (3) misspelled words, four (4) format deficiencies, and five (5) improperly dimensioned items will equal a total of 3 defects, one (1) for each category) and dimensional discrepancies of the hardware or drawings will count as one (1) defect for each discrepancy.

C.2.5.16.8 The Contractor must correct the errors and present corrective action through an ECP to the Government before PCA approval is considered.

C.2.5.16.9 In the event deficiencies are not resolved and corrected, the Contractor shall be deemed to have failed to make delivery within the meaning of the DEFAULT clause of this contract.

C.2.5.16.10 The Government reserves the right to stop acceptance of all vehicles if the PCA is not completed within the schedule specified in this contract. All costs associated with the contract or failure to complete the PCA as originally scheduled shall be borne by the Contractor.

C.2.5.17 Reserved.

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C.2.5.18 Continuous Improvement Teams. The Contractor shall establish continuous improvement teams. The Contractor shall appoint a representative to function as a Liaison Officer with the Government to keep the Government abreast of progress of the continuous improvement teams. The Liaison Officer will be responsible for maintaining statistical control charts for Contractor and Government detected discrepancies. The Liaison Officer should use a combination of statistical signals, Pareto analysis, and customer complaints to determine the vital few characteristics requiring investigation and corrective action. The continuous improvement teams shall have organizational freedom to cross departmental lines to obtain the resources needed to correct problems. The Contractor shall assure that corrective action feedback loops are in place to assure corrective action is taken at the source of the problem. The continuous improvement teams shall assure that the final inspection record is updated as required. The final corrective action for a particular issue shall address the root cause of the subject failure/problem as well as contain a description of the effort to apply the corrective action, lessons learned, and its applicability to other areas in order to preclude similar failures/problems.

C.2.5.19 Canceled Specifications and Standards. Specifications and standards referenced in the ATPD 2131C, Attachment 1 and FMTV TDP, Attachment 2, may be used to satisfy requirements even after the referenced documents are canceled. Replacement specifications and standards may also be used to satisfy ATPD 2131C, Attachment 1 and FMTV TDP, Attachment 2, requirements in lieu of the canceled document. Document replacement must be noted in the canceled and/or replaced documents. A technical evaluation shall be applied to determine the nearest equivalent requirement IAW new specifications or standards. The Contractor shall document any necessary interpretation and shall make this available to the Government upon request. The process used by the Contractor shall be submitted to the PCO for review and concurrence 30 days after contract award. This process shall follow the guidelines contained in DFARS 211.273 entitled Substitutions for Military or Federal Specifications and Standards.

C.2.5.20 Certifications to ATPD 2131C, Attachment 1, Performance Requirements. Fifteen (15) days prior to First Production Vehicle Inspection (FPVI), the Contractor shall provide all certifications required by ATPD 2131C, Attachment 1 to the Government IAW DI-MISC-80678 (CDRL A022). The certifications and testing required shall be resubmitted to the Government if changes are made to the hardware and systems subsequent to the original certification.

C.2.6 Program Management

C.2.6.1 Technical Data and Reports

C.2.6.1.1 Unless otherwise specified, the Contractor shall prepare technical data and reports and submit them in the format and scope specified in the applicable Contract Data Requirements List (CDRLs)(DD Form 1423), Data Item Description (DID) (DD Form 1664) or as described in the contract Scope of Work. Unless otherwise stated, all technical data and reports shall be submitted by E-mail or by other electronic means mutually agreed to by both parties. Data/Reports submitted by E-mail shall not exceed 3 megabytes (MB) in file size. Data/Reports over 3 MB shall be transmitted on a disk via regular mail. All proprietary data/export control data submitted by the Contractor shall be submitted via a computer disk.

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C.2.6.1.2 Data Item Descriptions. Copies of standard Data Item Descriptions (DIDs) invoked under this contract shall be provided as Exhibit B of this contract. Tailored DIDs along with unique DIDs unavailable through normal channels are also furnished with this contract as Exhibit B. Tailored DIDs are highlighted by the use of "(T)" following the DID number, eg., DI-E-1112(T).

C.2.6.1.3 Status Report. The Contractor shall provide the Government with a monthly status report of all technical data and reports required under this contract. The report shall, as a minimum, list all technical data, reports, studies, analyses, minutes, etc., when they are required, (e.g. monthly, one-time), when the data was delivered, and the requiring office for the item provided. The report shall identify those items not delivered on time and shall provide a revised date for the delivery of the item. The Contractor shall include a reason for all items delivered late. This report shall be in contractor format and shall be provided electronically to the Government no later than the fifteenth of the month. The first submittal of the report is the first month after contract award. This report shall be provided to the PCO, the ACO and to the Project Managers Office. (CDRL A023)

C.2.6.2 Vehicle Tracking Report.

C.2.6.2.1 The Contractor shall prepare and deliver a Vehicle Tracking/Shipping Report spreadsheet. Reporting is required for all truck and trailer CLINs under this contract. This shall include all vehicle loans. The first report shall be submitted the day of first vehicle delivery and will be provided electronically. The report data shall be maintained current for each day's production as additive to the master file. The Contractor will submit the report in a mutually agreed upon format in a program, such as Microsoft Excel. The report will contain the following information, and will be capable of being sorted by any of the columns of information (CDRL A024).

Vehicle Serial No.
CLIN No.
Model
Registration No.
Engine Serial No.
Transmission Serial No.
Build Date
Color
DD250 No.
DD250 Date
Govt. Bill of Lading (B/L) Ship Date
Govt. B/L
Customer (Mark for)/Purpose (such as PM-JSTARS, 519 Bat/IOT&E Vehicle)
MILSTRIP # (Document Number)
Total MILSTRIP Quantity
Ship to City/State
Method of Shipment (Rail/Truck)
If shipped by truck, the Carrier name
Vehicle Type (production or prototype)
Contract Mod for shipping instructions
Loan vehicles will include who vehicle is loaned to, duration, date it will be returned, & purpose of loan

C.2.6.2.2 Returned Vehicles. The Contractor shall also prepare and deliver a report for all vehicles returned to the Contractors site, containing the following information (CDRL A024):

CLIN
Vehicle Serial No.
Model No.
Registration No.
Ship from City/State
Vehicle Type (production or prototype)
Identify whether any retrofits, reworks or modifications are required and when they will be completed

C.2.6.3 Daily Shipping Report. The Contractor shall prepare and deliver a Daily Shipping Report spreadsheet, including weekends as applicable. Reporting is required for all truck and trailer CLINs under this contract. (CDRL A025). The first report shall be submitted the day after the shipment of first vehicle and shall be thereafter submitted daily for the previous days shipment. The report shall be electronically submitted in Microsoft Excel format capable of being sorted by any of the columns of information. A negative report is required for any day there is no shipment of trucks or trailers. The report will contain the following information:

Color
Ship Date
Govt. B/L
Vehicle Serial No.
Model

CONTINUATION SHEET**Reference No. of Document Being Continued**

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Name of Offeror or Contractor:

CLIN No.
DD250 Number
MILSTRIP # (Document Number)
Ship to City/State
Mode of shipment (rail, truck)

C.2.6.4 The Army Maintenance Management System (TAMMS). The Contractor shall complete DA Form 2408-9, Equipment Control Records for each end item of equipment IAW DID DI-L-1400A and DA Pamphlet 738-750. The Contractor shall prepare the form to report shipment of the item from the acceptance point of the initial accountable Army consignee (CDRL A026). The Log Book copy shall be placed in the book binder/equipment record folder and attached to the end item of equipment. Electronic copies will be delivered to LOGSA and TACOM (CDRL A026).

C.2.6.5 Cost Related Reports

C.2.6.5.1 Contractor Cost Data Reporting (CCDR) Requirements. The Contractor shall submit the cost-related reports specified below. All reports shall be prepared IAW the data item descriptions.

Form	Title	DID	CDRL
DD 1921	Cost Data Summary Report	DI-FNCL-81565	A027
DD 1921-1	Functional Cost-Hour Report and Progress Curve Report	DI-FNCL-81566A	A028

C.2.6.5.2 Cost Reports for Cost Reimbursable CLINs. The Contractor shall prepare and submit a cost report for all CLINs that are on a cost reimbursement basis (CDRL A029). The report shall be in Contractors format and shall include the following for each CLIN:

- a. Total cost to date
- b. Cost at completion

The report shall be submitted quarterly (every 3 months) and shall begin when the Contractor starts incurring costs against any cost CLIN. The report shall be submitted within 20 days of the end of the quarter the report is for, and shall include information for the last month of the quarter (eg., report if the report is for Apr, May, and Jun; it is due NLT 20 Jul and shall include data for Jun). The report shall be submitted to the Government as identified in CDRL A029.

C.2.6.6 Production Reports

C.2.6.6.1 Production Progress reports as required by FAR 52.242-2, entitled, "Production Progress Report", shall be prepared IAW the instructions printed on the DD Form 375 or in Contractor's format. DCMA review, comments, and signature are required prior to distribution of the report. Government approval is required if Contractor format is elected. The report shall be electronically submitted in Microsoft Excel format capable of being sorted. The first report shall be submitted 3 months prior to the first full month in which vehicle delivery is required. The report shall be submitted each month thereafter until a final report, so marked, is submitted at the close of the month during which the Contractor has made the final delivery of material under this contract (CDRL A030).

C.2.6.6.2 All report submittals shall be made not later than the 8th working day of the month following the month covered in the report. The report shall be sent by e-mail.

C.2.6.7 Meetings, Reviews and IPT Requirements

C.2.6.7.1 Meetings. The Contractor shall conduct the following meetings, unless otherwise notified by the PCO in writing:

C.2.6.7.1.1 Start of Work Meeting. A Start of Work (SOW) meeting shall be conducted at the Contractor's facility within 30 days after award of this contract. It shall last no longer than 2 days. This meeting shall review the Contractors systems and schedules that shall be utilized during this contract. The meeting will review the following functional areas:

- a. Engineering
- b. Product Assurance & Test
- c. Integrated Logistics Support
- d. Business Management/Contracts
- e. Program Management Review
- f. Partnering
- g. System Technical Support (STS)

C.2.6.7.1.2 Monthly Management Review. There shall be Monthly Management Reviews. The review shall last no longer than 1 day. The reviews shall be held via Video Teleconference (VTC), conference call, or at the Contractors facility, unless otherwise notified by the PCO in writing. VTC, in lieu of actual face-to-face meetings shall be the preferred method for conducting meetings. However, the Monthly Management Review shall be held quarterly at the Contractors manufacturing facility. The Monthly Management Reviews shall include the following:

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- a. Engineering Management Review
- b. Product Assurance & Test Management Review
- c. Integrated Logistics Support review
- d. Business Management/Contracts Review
- e. Program Management Review
- f. Partnering
- g. System Technical Support (STS)

C.2.6.7.1.3 Integrated Product Teams (IPTs). The Contractor shall form IPTs as necessary to interact with the Government Project Manager's office during the term of this contract. The following are examples of IPT meetings that are included under this category:

a. ILS Reviews - ILS Reviews will be event-driven and agreed to by the Government and Contractor. Publications Reviews and Provisioning Conferences are examples of ILS Reviews included in this category of ILS Reviews. Meeting times and locations will be agreed to by the IPT. Meeting agenda will be jointly developed and will focus on the status of the logistics support package, logistics planning, development, schedules, issues and actions. A record of all key decisions and actions will be maintained by the Contractor, and approved by the Government and Contractor.

b. Quality Assurance Management Meeting - The Contractor shall schedule and participate in Quality Assurance Management Meetings to be held alternately between TACOM and the Contractors production facility or by VTC. The initial meeting shall be at TACOM and held within 90 days of contract award. Follow-on meetings shall be held every 60 days thereafter. Unless agreed otherwise, the meetings shall be no more than day in length. The Contractor shall present status of agenda topics at the meeting. The Contractor shall prepare minutes IAW CDRL A031 and an agenda IAW CDRL A020. For meetings scheduled at TACOM, the Contractor shall include a list of attending personnel with their citizenship and date of birth along with their agenda.

C.2.6.7.2 Meeting Management.

C.2.6.7.2.1 Agendas. The Contractor shall prepare agendas for all meetings in the contract in Contractor format. Agendas shall be submitted by e-mail 5 calendar days prior to the meeting (CDRL A020).

C.2.6.7.2.2 Minutes. The Contractor shall prepare minutes of meetings specified in the contract in Contractor format. Minutes, with a list of attendees, shall be provided as identified in CDRL A031 by e-mail, in MS Word format, within ten (10) working days after the meeting.

C.2.7 Integrated Logistics Support (ILS)

C.2.7.1 Basic Requirement. The Contractor, together with the Government, shall plan, manage, and execute the logistics requirements described herein of the FMTV A1 CR program. With respect to ILS, the term "FMTV A1 CR program" or "FMTV A1 CR vehicles" refers to the following vehicles:

M1078 A1	TRK, CARGO, LMTV w/o winch	2320-01-447-6343
M1078 A1	TRK, CARGO, LMTV, w/winch	2320-01-447-3888
M1079 A1	TRK, VAN, LMTV w/o winch	2320-01-447-4938
M1080 A1	TRK, CHASSIS, LMTV w/o winch	2320-01-447-6345
M1082	TRAILER, CARGO, LMTV	2330-01-449-1775
M1083 A1	TRK, CARGO, MTV w/o winch	2320-01-447-3890
M1083A1	TRK, CARGO, MTV, w/winch	2320-01-447-3884
M1084 A1	TRK, CARGO, MTV, w/MHE	2320-01-447-3887
M1085 A1	TRK, CARGO, MTV, LWB w/o winch	2320-01-447-3891
M1085 A1	TRK, CARGO, MTV, LWB, w/winch	2320-01-447-3897
M1086 A1	TRK, CARGO, MTV, LWB, w/MHE	2320-01-447-3895
M1088 A1	TRK, TRACTOR, MTV w/o winch	2320-01-447-3893
M1088 A1	TRK, TRACTOR, MTV, w/winch	2320-01-447-3900
M1089 A1	TRK, WRECKER, MTV, w/winch	2320-01-447-3892
M1090 A1	TRK, DUMP, MTV w/o winch	2320-01-447-3899
M1090 A1	TRK, DUMP, MTV, w/winch	2320-01-447-6344
M1092A1	TRK, CHASSIS, MTV w/o winch	2320-01-447-3894
M1095	TRAILER, CARGO, MTV	2330-01-449-1776
M1096 A1	TRK, CHASSIS, LWB, MTV	2320-01-447-3885

Note: Logistics support for the XM1087A1 TRK, VAN EXPANSIBLE w/o winch, NSN: 2320-01-459-3895 is planned under the STS portion of this contract. Logistics support for M1084A1/RSV TRK, CARGO, MTV (HIMARS RSV) and XM1140 CHASSIS: HIMARS Launcher Chassis is being acquired under another contract. **

ILS program objectives are to analyze the support requirements and to develop and deliver a logistics support package including parts,

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provisioning data, technical data, training, and technical support for Contractor-generated ECPs for the FMTV A1 CR vehicles and Special Purpose Kits listed in the ATPD 2131C, Attachment 1, Annex M. The ILS package shall include all the logistics data specified below, which supports all Contractor-generated ECPs for the FMTV A1 CR vehicles and Special Purpose Kits. All ILS/Logistics Management Information (LMI) shall be prepared and delivered IAW the requirements specified herein, on the related CDRLs, and IAW guidance provided in Military Handbook 502 Department of Defense Handbook for Acquisition Logistics and Military Performance Specification 49506. The Contractor shall provide ILS management support that includes:

- a. End Item(s) Configuration Management Control/ILS Functional Interface
- b. LMI Research, Analysis, Development, and Documentation
- c. Vehicle System Operation and Maintenance Engineering Analysis/Planning
- d. Vehicle System Initial and Follow-on Provisioning/Supply Support
- e. Vehicle System Technical Publications Development and Continuous Update
- f. Operator and Maintenance Training/Training Material Development/Update

Additional ILS program objective is to maintain commonality between variants, and downward compatibility from the FMTV A1 CR models down to the FMTV A0 and FMTV A1 models.

C.2.7.2 ILS Management Responsibilities. The Contractor shall appoint an ILS Manager under the FMTV contract who will be the primary Point of Contact (POC) for the Contractor development of logistics products for the production effort and STS effort (C.3.4.2). The Contractors ILS manager or their designee will:

- a. Be responsible for managing Contractor efforts to meet logistics planning requirements defined by the ILS Integrated Product Team (IPT)
- b. Serve as the lead for the Contractor for ILS IPT Reviews
- c. Participate in milestone planning and ensure logistics products are developed based on the jointly developed (Contractor and Government) master schedule

C.2.7.3 The Contractor shall provide data sufficient to allow development of new ILS products such as provisioning, cataloging, operator, maintenance and training technical data, spare and repair parts information, and deliver that data, as specified within this contract and the related CDRLs/DIDs/specifications with related attachments.

C.2.7.4 ILS Management Control Log. The Contractor shall maintain an ILS Management Control Log (Contractor format, electronic file) (CDRL A032) with supporting documentation for Government review, as required, that tracks all changes to the production configuration baseline and subsequent ILS/LMI impact, to include the following:

- a. ECP Control Number (system, subsystem, component, part)
- b. Provisioning Change (Required/Not Required), by affected system, sub-system, assembly, subassembly, component Part Number (P/N), Contractor and Government Entity Code (CAGEC), and NSN, if available via screening
- c. Operation/Maintenance Instructions Change (Required/Not Required), by affected paragraphs/pages
- d. Operation/Maintenance Training Material Change (Required/Not Required), by affected training packages, paragraphs, pages
- e. Technical Publication Change (Required/Not Required), by affected Technical Manual (TM), paragraphs, pages, illustrations

C.2.7.5 Dedicated ILS Hardware. The Contractor shall ensure that first production hardware is available for the development, validation and verification of the ILS package to include the technical manuals.

C.2.7.6 System Support Package (SSP). The Contractor shall deliver a System Support Package (SSP) to support each TM Verification/Logistic Demonstration. The Contractor shall deliver SSPs to the indicated site by the required date. Items not furnished or not furnished in sufficient quantities to support the activity shall be delivered to the site of the activity within 24-48 hours of notification. The SSP shall include the latest configuration spare and repair parts, all special tools and Test, Measurement and Diagnostic Equipment (TMDE), and the latest version of equipment publications. A System Support Package Component List shall be prepared IAW CDRL A015.

C.2.7.7 Logistics Management Information (LMI) Research, Analysis, Development, and Documentation - Data

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C.2.7.7.1 LMI data is herein defined as all vehicle specific technical information required to safely operate, maintain, and support the system by the intended target audience in its designated environment(s) for the expected life-cycle of the equipment.

C.2.7.7.2 The Contractor shall brief his strategy for conducting operation and maintenance analysis at the ILS SOW Meeting. Updates to any analysis, procedures, and/or strategy shall be briefed at each subsequent ILS review.

C.2.7.7.3 Logistics Management Information Summaries (LMIS)/Supportability Analysis Summaries (SAS), Maintenance Analysis Planning/Repair.

C.2.7.7.3.1 The Contractor shall conduct a review of new operation and maintenance information for the affected systems (FMTV A1 CR) focusing on operation and maintenance analysis for new vehicle assemblies, sub-assemblies, spare parts, Basic Issue Items (BII), Component of End Item (COEI), Additional Authorized List (AAL), and kits, and identify the tools required to define optimal maintenance support. The Contractor shall ensure LMI is fully addressed in all ECPs and that LMI is maintained to the most current configuration baseline and LMI Data Summaries are provided IAW CDRL A033, DI-ALSS-81530. **

C.2.7.7.3.2 Reserved.

C.2.7.7.4 Oil Analysis Report, DI-MISC-80390, CDRL A035. The Contractor shall update the Oil Analysis Report for the FMTV A1 CR engine and transmission, as required. If there is any change in model or configuration of the engine or transmission between the FMTV A1 model and the CR model, this report shall be provided by the Contractor for the component (engine or transmission) which has been changed. If there is no change in model or configuration in either the engine or the transmission, then this report will not be required. The report shall contain information on wear-metal, metallurgy, location of sampling valves, chemical composition of non-standard lubricants supplied or required by the Contractor, failure rates of oil-lubricated components and recommendations for sampling and change intervals and lubricant physical property limitations.

C.2.7.8 Provisioning Program.

a. The FMTV system has an existing Provisioning Master Record (PMR). It will be determined at the SOW meeting whether parts that are not common will be addressed by either a separate Use on Code (UOC) or tracked by serial number. The Government will provide a copy of the LSA/LMI database and the PMR database after the Start of Work meeting so the Contractor can perform a reconciliation of the two.

b. The provisioning program for the FMTV requires that the Contractor maintain the PMR providing the Government with data IAW Logistics Management Information Data Procedure, Attachment 14, LMI Data Products IAW CDRL A036, DI-ALSS-81529. Provisioning will be maintained to a baseline representative of each engineering change. The PMR contains all data for the assemblies, sub-assemblies, spare parts, and kits to include COEI, BII, AAL, and Special Tools and Test Equipment required to support the FMTV.

c. All provisioning data submitted under this contract for the purpose of PMR initial load or maintenance shall be IAW the requirements herein; drawings/illustrations sufficient for provisioning shall be in *.pdf format. Updates to provisioning data shall be provided by the Contractor IAW CDRLs A036 (DI-ALSS-81528), A037 (DI-ALSS-81529), A038, (DI-ALSS-81530), and A039, DI-ALSS-81529.

d. The respective PMRs for each of the FMTV systems shall be the primary source for all Repair Part and Special Tools List (RPSTL) generation for the life of this contract.

e. Pending completion of the database reconciliation process and completion of any new provisioning efforts on Contractor generated ECPs, to include all subsequent Provisioning On-line System (POLS) inputs, the Contractor will generate a Logistic support Analysis (LSA) RPSTL Proof output product and forward it to the Government for the purpose of RPSTL integration. The Contractor shall be responsible for consolidating the RPSTL Proof parts list and corresponding RPSTL illustrations to form a completed RPSTL revision/changes for each FMTV. *

C.2.7.8.1 LMI Data Products/Provisioning Parts List (PPL), DI-ALSS-81529, CDRL A036, as provided in Data Product Checklist, Attachment 15.

a. The Contractor shall maintain a Provisioning Parts List (PPL) in Contractor format (hard copy and electronic file) that contains the proposed items to be updated/loaded into the PMR.

b. After the composite FMTV PMRs are completely loaded/updated to reflect the FMTV A1 CR approved configuration at time of contract award, the Contractor shall continuously maintain provisioning data for the FMTV. The PMR shall be updated as agreed to by the IPT.

c. PLISNs shall be added and/or changed to reflect any changes in production configuration resulting from Engineering Change Proposals (ECPs) and/or Original Equipment Manufacturer (OEM)/vendor parts information changes. The existing PLISN/LCN structure

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will be used to the greatest extent possible.

C.2.7.8.2 LMI Data Products /Provisioning Parts List Index (PPLI) DI-ALSS-81529, CDRL A037 as provided in Data Product Checklist, Attachment 15. Cross-reference list of entries on the Provisioning Parts List (PPL) is to be prepared and delivered with each Provisioning Parts List submission.

C.2.7.8.3 LMI Summaries/Pre-Procurement Screening, DI-ALSS-81530, CDRL A038. The Contractor shall conduct pre-procurement screening of part numbers and/ or technical characteristics screening for all items to be provisioned. Drawings are not required for items accompanied by a copy of pre-procurement screening results, which indicate the item has a valid NSN.

The Contractor shall have the following at each provisioning conference/review:

- (1) Proposed changes to LMI data in Contractor format for review.
- (2) One drawing for each part listed on the LMI Data Product Report that does not have an NSN.
- (3) A copy of the pre-procurement screening that shows either a hit or no-hit for NSNs.

C.2.7.8.4 LMI Products/Supplementary Provisioning Technical Documentation (SPTD)/Drawings (DI-ALSS-81529, CDRL A039). The Contractor shall have provisioning conferences as soon as data is available but no later than 60 days after each PVT completion to provision the Contractor-generated ECPs. The Contractor shall have available for review at each provisioning conference/review one hard copy SPTD/drawing for each item on the PPL that requires NSN assignment. These drawings shall include a parts list, detail and assembly drawings, interface control data, diagrams, performance characteristics, assemble/ make-from instructions, and details of material for each assembly, sub-assembly, spare part(s), kits, special tools, BII, AAL or COEI on the FMTV vehicle system.

a. The drawings shall be in PLISN sequence.

b. After approval of each drawing as being suitable for NSN assignment, the drawings shall be submitted on a Compact Disk (CD) in Adobe Acrobat, pdf file, or some other software product format as agreed to, one week after completion of each provisioning conference/review.

c. Text on all drawings shall be in the English language.

d. The Contractor shall have all approved vendor Commercial and Government Entity (CAGE) Codes typed, stamped or written legibly with an authorized signature and date cited on all drawings.

e. Substitutes for drawings, such as commercial catalogs or catalog descriptions, sketches or photographs with brief descriptions of dimensions, material, mechanical, electrical, or other descriptive characteristics are permitted only by exception on a case by case basis by provisioner/Defense Logistics Information Service (DLIS) personnel.

C.2.7.8.5 Special Equipment Tools and Test Equipment List (TTEL) (DI-ILSS-80868(T), CDRL A040). The Contractor shall prepare and deliver a TTEL listing those new, changed support items for the FMTV A1 CR and Special Purpose Kits listed in ATPD 2131C, Attachment 1, Annex M that are not currently listed in the FMTV A1 Manuals. A list of Supply Catalogs can be found in DA Pamphlet 25-30, Sec. 6. The TTEL List, with drawings, shall be identified at the first provisioning conference/review. Based on approval of the TTEL, the Contractor shall deliver the data concurrently with the first submittal of the provisioning data. Updates shall be provided with each subsequent delivery of the LMI Data Products.

C.2.7.8.6 Next Higher Assembly (NHA) PLISNS and Overhaul Quantities.

a. NHA PLISNs and overhaul quantities (OVHL QTY) are generated through the provisioning process and used to identify and forecast repair parts requirements for all assemblies/subassemblies/ components. OVHL QTY is the estimated number needed to support overhaul of 100 NHA.

b. The Contractor shall enter the immediate NHA PLISN as well as the applicable end item PLISNs, their Indicator Code and OVHL QTY for each new PLISN entered in the PMR.

C.2.7.9. Government System Access. The Contractor shall provide updates to the PMR in a manner agreed to by the Government.

C.2.7.10 LMI Quality Control Testing/Validation - LMI Quality Assurance Verification.

C.2.7.10.1 LMI Quality Control Testing/Validation. The Contractor shall physically test/validate 100% of the new LMI being procured under this contract. Method of LMI testing/validation shall be at the Contractors discretion; however, testing/validation methodology shall be sufficient to correct all technical inaccuracies within the LMI. Validation methodology shall be presented at the Start of Work meeting.

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C.2.7.10.2 LMI Quality Assurance Verification. Government LMI quality assurance sample verification for new LMI being procured in this contract will begin at the time of contract award and will continue throughout the life of this contract. Sample verification will be conducted at the Contractors facility and at Government installation/facilities, at the discretion of the Government. Verification support shall be provided by the Contractor. If required, the Government will notify the Contractor of verification support requirements NLT 30 days prior to the verification start date. The Contractor shall provide verification support no later than the verification start date. The Government reserves the right to use target audience maintainers to perform sample verification tasks.

C.2.7.10.3 Maintenance Allocation Chart (MAC). The Contractor shall update the MAC presently in the FMTV TMs to reflect the Contractor FMTVA1 CR configuration as described in C.1.2.5.

C.2.7.11 Reserved.

C.2.7.12 Unique ASL. The Contractor shall identify unique Authorized Stockage Levels (ASL) contained in the Contractor FMTV A1 configuration as described in C.1.2.5, which should be added to the Governments current baseline, and submit at the first provisioning review IAW CDRL A041. The listing shall include Part Number (P/N), Contractor and Government Entity (CAGE) code, NSN (if assigned), name, Essentiality code, Routing Identifier Code (RIC), unit price, and quantity per number of vehicles.

C.2.7.13 Changes to Special Purpose Kits,. listed in ATPD 2131C, Attachment 1, Annex M The Contractor shall identify any changes required to utilize the current Special Purpose Kits on the FMTV A1 CR, prepare an impact statement and submit at the first provisioning review. (CDRL A042)

C.2.8 RESERVED

C.2.9 Publications Requirements

C.2.9.1 Technical Manuals

C.2.9.1.1 The Contractor shall prepare and deliver revised FMTV Technical Publications to include Contractor-generated ECPs for the FMTV A1 CR vehicles and Special Purpose Kits (listed in ATPD 2131C, Attachment 1, Annex M) IAW Technical Manuals (TM) CDRLs A043, A044, A045, A046, A051 and A052. The IETM will adhere to the content requirements of MIL-STD-40051A. The IETM structure will adhere to the Document Type Definitions (DTDs) within the Electronic Maintenance System (EMS), Government furnished IETM development software.

TM9-2320-392-10	MTV A1 Operator's Manual
TM9-2320-392-10-HR	MTV A1 Hand Receipt
TB9-2300-427-15	MTV A1 Warranty Technical Bulletin
TM9-2320-391-10	LMTV A1 Operator's Manual
TM9-2320-391-10-HR	LMTV A1 Hand Receipt
TB9-2300-426-15	LMTV A1 Warranty Technical Bulletin

FMTV A1 Interactive Electronic Technical Manual (IETM).

IETM Contents

TM9-2320-392-10	MTV Operator's Manual
TM9-2320-392-10-HR	MTV Hand Receipt
TB9-2300-427-15	MTV Warranty Technical Bulletin
TM9-2320-392-20	MTV Unit Maintenance Instructions
TM9-2320-392-24P	MTV Unit, Direct Support (DS) and General Support (GS) Maintenance Repair Parts and Special Tools List (RPSTL)
TM9-2320-392-34	MTV Direct Support and General Support Maintenance Instructions
TM9-2320-391-10	LMTV Operators Manuals
TM9-2320-391-10-HR	LMTV Hand Receipt
TM9-2300-426-15	LMTV Warranty Technical Bulletin
TM9-2320-391-20	LMTV Unit Maintenance Instructions
TM9-2320-391-24P	LMTV Unit, DS and GS RPSTL
TM9-2320-391-34	LMTV DS and GS Maintenance Instructions
TM9-2330-394-13&P	LMTV/MTV Trailer Manual

C.2.9.1.2 The Government will furnish the most recent FMTV IETMs for the purpose of establishing a FMTV A1 baseline for update, if required. The Government will also provide a copy of the Electronic Maintenance System (EMS) computer operating system software if required. In addition, the Government will provide the Contractor the most current version of the EMS throughout the life of this contract. The Government will also provide IETM authoring training if required. The Contractor shall remain current with the Armys IETM working group and Army Diagnostic Improvement Programs (ADIP) as well as EMS2 software enhancements to insure successful update of the IETM.

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C.2.9.1.3 The IETM Revision listed above shall filter information by vehicle, by vehicle model, and by maintenance level. This filtering means that once a user chooses a particular vehicle, vehicle model, and maintenance level, only data pertaining to that filter element will be displayed.

C.2.9.1.4 Intrusive Testability Analysis. When the IETM is impacted by design changes, the Contractor shall analyze the testability of all new subsystems on-board the FMTV A1 CR vehicles to determine their potential to enhance the troubleshooting process through intrusive diagnostics. The Contractor is responsible for maintaining a suitable technical relationship with applicable vendors and/or subcontractors, such that all technical and user issues related to testability are resolved to the satisfaction of the Government.

C.2.9.1.5 The Contractor shall update, as required, the IETM troubleshooting taking full advantage of the intrusive testing and database interrogation capability of the EMS software and the vehicles on-board Electronic Control Units/Modules (ECUs/ECMs), for any ECPs dealing with the four major diagnostic systems, ABS, engine, transmission, and CTIS. The Contractor shall obtain data descriptions and programming codes necessary to communicate with the ECUs/ECMs and subsystems, and will identify and describe them in the LMI (IETM).

C.2.9.1.6 The Contractor shall update diagnostic procedures for troubleshooting of the FMTV as specified in MIL-STD-40051A. All vehicle systems and subsystems shall be covered by these procedures. The diagnostic procedures shall be based on the concepts of Artificial Intelligence (AI) and/or expert systems. AI is defined as systemic problem-solving using the component first, which has the highest probability of being the cause of the failure, then proceeding to the next most likely cause of the system failure.

C.2.9.2 Publication Records

C.2.9.2.1 Validation Plan. The Contractor shall prepare/update Validation Plan(s) IAW CDRL A050 for each validation effort, and Validation Certifications for each TM/IETM. The Validation Plan shall be submitted 60 days prior to Validation effort. The Contractor shall prepare a Validation Certification for each TM/IETM IAW DID DI-M-2196 (CDRL A047). The Contractor shall assure that the TM/IETM will accurately reflect the configuration of the production vehicles and shall include any test corrections, engineering changes, vendor changes and corrections to any errors that are not part of the latest published edition of the IETM (EM 0195). The Contractor shall develop and demonstrate for Government approval, the policies, processes and procedures by which he will ensure that his writing, illustrating, and editing staff are thoroughly trained in the development of the TMs/IETM. The Contractor shall ensure that TMs/IETM are uniform in format, content, depth of coverage and target audience Reading Grade Level (RGL). Description of the implementation of the aforementioned policies, processes and procedures shall form part of the Technical Manual Plan.

C.2.9.2.2 Technical Manual Status and Schedules. Technical Manual/IETM status and schedules shall be furnished IAW DI-M-6155 (CDRL A048).

C.2.9.2.3 Technical Manual Cost Report. The Contractor shall provide a Publication Cost Report IAW DID DI-FNCL-80729 (CDRL A049). This report must accompany any Final Reproducible Copies (FRC) (previously FDEP) to which it applies.

C.2.9.3 Copyright Release. The Contractor shall furnish an unlimited release giving the Government permission to reproduce and use copyrighted material contained in any commercial data being used to fulfill the terms of the contract. When the Contractor uses commercial data which covers a subcontractor's component(s) or portion thereof, and the subcontractors data contains copyrighted material, the Contractor shall be responsible for obtaining a copyright release from their subcontractor and furnishing such release to the PCO. In the event no copyrighted information is used in a deliverable under this contract, the Contractor shall certify this in writing. The PCO shall review the copyright release or letter before the copyright material is released. This release/letter must be delivered with or before the FRC it covers. An FRC will be considered incomplete without this release/letter. The Contractor shall package and deliver all source material, defined as operating plans, standard procedures, computer programs and residual material, source codes, computer disks, computer tapes, and all other media containing digital files developed to fulfill the requirements of this contract. The Contractor shall grant the Government unlimited right to any and all data/products under this contract.

C.2.9.4 Technical Manual Validation

C.2.9.4.1 Validation. The Contractor shall conduct TM/IETM Validation. The Government will require 100% Validations. Hands-on Validation shall be required for disassembly of major components, e.g. engine, transmission, Anti-lock Brake System (ABS), axles, new vehicle models, etc. and shall be 100% performed. The Government may elect to observe the Contractor's Validation(s) to supplement satisfaction of the Government's Verification requirements. However, the Government may exercise its right to perform separate, partial or 100% Verifications. Contractor shall provide Technical Manuals Certifications IAW DID DI-M-2196 (CDRL A047).

C.2.9.4.2 Validation Hardware. The hardware made available for Validation efforts shall be the same type of hardware required for Verification efforts. The vehicles shall be production hardware.

C.2.9.5 Publication Validation Quality.

C.2.9.5.1 The Contractor shall validate the technical accuracy and adequacy of all operating and maintenance procedures.

C.2.9.5.2 The Government reserves the right to witness the validation. However, Government observation of the validation will not necessarily constitute a verification of the material.

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C.2.9.5.3 The Contractor shall maintain records showing dates of validation reviews, material reviewed by task or action, findings with applicable remarks, and action taken IAW ISO 9001 or an equivalent standard. The Government's technical manager or designated representative reserves the right to examine these records at the Contractor's facility.

C.2.9.5.4 Unless otherwise advised in writing through the PCO, verification by the Government will be performed at the Contractor's facility. The verification timeframe will be mutually agreed upon by the Government and the Contractor. The Contractor shall provide all necessary resources to support the Government verification as outlined in paragraph C.2.9.7 below.

C.2.9.5.4.1 The Contractor shall correct all errors found in the Standard Generalized Markup Language (SGML) instance and graphics during verification, at no additional cost to the Government. After Government receipt of the product, the Government reserves the right to require the Contractor to correct all errors found in the manuscript at no additional cost to the Government within 15 days of Government notification. This includes the initial submission and any other subsequent product. The Government reserves the right to review and approve the changes for approval until the data is correct as many times as necessary at no additional cost to the Government. The 15 day timeframe includes the time from notification of an error in the manuscript to the time the corrected text is postmarked by the postal service. This includes reshipping, but not receipt by the Government.

C.2.9.5.4.2 The Contractor shall support the verification by the Government and shall do, at a minimum, the following:

- a. Provide equipment for displaying IETMs during the verification process
- b. Record and maintain records during the verification process
- c. Provide assistance to the technical manager or their designated representative during the verification, and provide the Government with a copy of the discrepancies identified
- d. Make necessary corrections to the discrepancies identified during the verification process
- e. Provide the technical publications representative or their designated representative with a report of the corrective actions taken
- f. Provide administrative support for completion of the verification

C.2.9.5.5 Warranty of Logistics Data - See paragraph H.5.

C.2.9.6 Technical Manual Verification

C.2.9.6.1 Verification. The Government will be responsible for conducting verifications of all TM changes/IETM revisions prepared and updated under this contract. The verifications will be conducted at the Contractor's site. Contents of TM changes/IETM Revision will be 100% verified unless deemed unnecessary by the Government. TACOM reserves the right to supplement the verification of any portion of the TMs/IETM by witnessing the Contractor's Validations of the equipment. If the foregoing is exercised, the Government reserves the right to make a final determination of acceptability of the witnessed procedures, or to verify hands-on at a mutually agreed upon date. The Contractor shall support Government manual verifications at TACOM by having vehicle-knowledgeable personnel available or on call. The Contractor shall also provide, prior to or at the start of Verification, a complete, accurate, updated RPSTL and MAC to support the Verification effort. The RPSTL and the applicable vehicle shall match.

C.2.9.6.2 Technical Manuals/IETMs to Support Verification. The Contractor shall support verification of preliminary technical manuals (previously DEPs) and IETM as indicated in these sections/applicable specifications. All verification findings shall be incorporated by the Contractor in the Final Reproducible Copies (TMs and IETM) and made available for Government review. The Contractor shall not incorporate any changes/corrections to any TMs/IETM without the knowledge and approval of the Government. Any such additions to any TMs/IETM will impact the acceptance/rejection of subject TMs/IETM.

C.2.9.7 Publications Review. Publications will be reviewed, after Verification, by the Government for technical accuracy, editorial accuracy, compliance with guidance, completeness, usability, accuracy, consistency and usability by the target audience. The Government will provide comments, in writing, on the results of each review within approximately 60 days.

C.2.9.8 Publications Final Delivery. The Contractor shall deliver IAW CDRLs A043-A046.

C.2.10 Training

C.2.10.1 The Contractor shall provide instructors, instructions and related technical literature in support of the training cited below for Government Personnel and Service Contractor Personnel on Operation/Operator maintenance (OP), Unit Maintenance (UM), Direct Support (DS) maintenance, and, if required, General Support (GS) maintenance, repair and troubleshooting of all equipment furnished by the Contractor in fulfillment of this Contract.

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C.2.10.2 Training Plan. The Contractor shall provide a training plan (Contractor's format) that outlines the approach to meeting the training requirements cited in paragraph C.2.10.1 above. The training plan shall depict lessons to be taught at each level, along with an estimate of the material, time and number of instructors required to teach each lesson. The training plan shall be delivered electronically in a "Windows '98" format IAW CDRL A053.

C.2.10.3 Training Materials. The Contractor shall provide an Instructor Guide (IG) and Student Guide (SG) in a multi-media PowerPoint format. The IG and SG shall reflect all new technology impacts as they differ from the current FMTVAL vehicles. The Government Training POC will a hard copy and a CD ROM copy of the current FMTVAL IG and SG at the SOW meeting. The IG and SG shall reflect the levels of training cited in paragraph C.2.10.1 above. (CDRL A054)

C.2.10.4 Course Completion Materials

C.2.10.4.1 Upon completion of each training effort, the Contractor shall provide each student a training course completion certificate (Contractor's format) IAW CDRL A055, DI-SESS-81522B(T).

C.2.10.4.2 Upon completion of each training effort, the Contractor shall provide the Government Training POC a copy of the student roster and respective critique sheets (Contractor format) for each class completed IAW CDRL A055, DI-SESS-81522B(T).

C.2.10.5 New Equipment Training Support Package (NETSP)

C.2.10.5.1 Training Aids. The Contractor shall develop a projected list (Contractor format) of training aids, i.e. engines, transmissions, axles, etc. that are deemed necessary to support UM, DS and possibly GS level training. Components selected shall be based on "new technology" impacts of the A1 CR vehicles IAW CDRL A056.

C.2.10.5.2 Test training will be the mechanism used to verify requirements for the training aids, if any are required. Upon completion of test training, a determination will be made as to what training aids will be required, if any, for the I&KPT effort.

C.2.10.5.3 Training Consumables. The Contractor shall develop a projected list (Contractor format) of consumable items deemed necessary to conduct PVT, LUT and I&KPT. The Contractor shall provide consumables deemed necessary to support the above training efforts and the consumables shall be on-hand at the respective training sites at the start of each respective training effort. (CDRL A056)

C.2.10.6 Production Verification Test (PVT) Training

C.2.10.6.1 The Contractor shall provide two (2) technically qualified instructors to provide required training at the Government PVT site, Aberdeen Test Center (ATC), MD. Two of the PVT vehicles will be used to support each training segment (PVT 1, 2, and 3).

C.2.10.6.2 Operator Training - Three(3) separate, informal, Operator Training classes shall be conducted. These training classes shall coincide with the delivery of each group of PVT vehicles to ATC and shall not exceed sixteen (16) hours in duration and shall be limited in scope of training (with exception of the expansible van) as follows:

- a. Introduction to the new technology enhancements of the vehicles
- b. A short restricted driving experience over an ATC approved course

Expansible van training shall not exceed twenty four (24) hours in duration and shall include the above scope of training, plus additional time for set up, expansion and retraction of the van body.

C.2.10.6.3 Maintenance Training - For PVT 1, and 2, informal classes shall be conducted by the on-site Technical representatives. All required training shall be conducted at ATC prior to the start of each PVT event and shall not exceed eight (8) hours in duration. The scope of each class shall include:

- a. Refresher/update on new technology enhancements (show and tell)
- b. Overview of diagnostics for new technology enhancements (demo only)
- c. Overview of maintenance tasks for new technology components (talk through or demo on separate component)

No maintenance tasks shall involve removal and replacement of components on PVT vehicles.

Maintenance Training for PVT 3 shall be conducted by the on-site Technical Representatives when the expansible vans arrive at ATC for PVT and shall not exceed forty (40) hours in duration. The scope of the expansible van class shall include:

- a. Overview of van unique components/new technology components (show and tell)
- b. Electrical, hydraulic and pneumatic system differences/enhancements (show and tell)
- c. Basic diagnostics for new technology differences (talk through or demo on separate components)
- d. Power pack removal and replacement (if impacted by the expansible van body design)

If the expansible van maintenance class requires training on the removal and replacement of the power pack because of impact of the van

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design, then this class shall be conducted at the Contractor's facility using expansible vans not designated for the PVT effort.

C.2.10.7 Limited User Test (LUT) Training

C.2.10.7.1 The Contractor shall provide 2 technically qualified training instructors to provide required training at the LUT test site, Ft. Hood, TX. The following training is required at Ft. Hood:

- a. One (1) OP class, not to exceed 80 hours in duration.
b. One (1) OP/UM/DS class, not to exceed 80 hours in duration.

C.2.10.7.2 Training for the above classes shall be provided on the two MTV Expansible Vans from LUT.

C.2.10.7.3 Operator familiarization shall be taught at the beginning of the OP/UM/DS class.

C.2.10.7.4 Should GS level training be required, it shall be added to the end of the OP/UM/DS class and shall not exceed an additional 40 hours in duration.

C.2.10.8 Instructor & Key Personnel Training (I&KPT).

C.2.10.8.1 The Contractor shall provide 2 technically qualified instructors to provide I&KPT at the Regional Training Site-Maintenance at Ft. Stewart, GA. The below listed training shall be required:

- a. One (1) OP class, not to exceed 80 hours in duration
b. One (1) OP/UM/DS class, not to exceed 80 hours in duration

C.2.10.8.2 Training for the above classes shall be provided on the 2 MTV Expansible Vans from the Government.

C.2.10.8.3 If new technology insertions affect training for other models in the family, then training (new technology insertions only) must be provided on those models (both Operator and Maintenance training).

C.2.10.8.4 Operator familiarization shall be taught at the beginning of the OP/UM/DS class.

C.2.10.8.5 Should GS level training be required, it shall be added to the end of the OP/UM/DS class and shall not exceed 40 hours in duration.

C.2.10.9 Training Schedules and Class Sizes.

C.2.10.9.1 All training schedules shall be as mutually agreed to between the Government and the Contractor based on vehicle availability.

C.2.10.9.2 Class size shall not exceed 12 students for each class.

C.2.11 Transportability Report - The Contractor shall prepare the Transportability Report in accordance with the guidelines provided in AR 70-47 and the Data Item Description DI-PACK-80880 (Contract Data Requirements List A085). The Transportability Report shall include all vehicle models." ***

C.2.12 Life Cycle Cost Management Initiatives. The Contractor is encouraged to aggressively propose preliminary initiatives to reduce life cycle costs(i.e., reliability, maintainability, and cost reduction initiatives), and present these concepts at each Monthly Management Review. The Government's intent is to significantly extend the service life of all components and minimize or eliminate all tools and external TMDE necessary to perform both unit level maintenance and services, and intermediate level (above unit level) maintenance tasks and services. Cost Reduction Initiatives (CRIs) need to be expressed in adequate detail for Contractor and Government managers and subject matter experts to engage in a meaningful discussion. All initiatives will be reviewed by the Government and instructions to the Contractor will be issued within 30 days of receipt. Contractor efforts to identify preliminary CRIs should not exceed 40 man-hours per month for the first program year under the Program Support CLIN. CRI identification work effort for subsequent program years will be authorized via STS work directive. The Government will consider the proposed CRIs and decide whether to pursue any of them further. Subsequent Contractor development of CRI concepts will be accomplished via a Government-directed STS effort.

C.2.13 Maintainability Initiative. In addition to Value Engineering Incentives, the Contractor is specifically incentivized to improve FMTV maintainability by reducing the maintenance ratio (MR) for all of the truck models listed in the table below. To receive incentive payment, the initial reduction must be a minimum of 10% of each MR specified below and shall be measured in increments of 5% thereafter until a reduction of 25% is met. The initial incentive shall be \$200 per truck, with an additional \$50 per truck for each 5% increment of improvement through a 20% reduction, and an additional \$100 per truck reaching 25%, which will earn the maximum of \$400 per truck.

Percent Improvement Incentive Per Truck

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10%	\$200
15%	\$250
20%	\$300
25%	\$400

If ECPs are needed to achieve the reduction, ECP preparation and implementation shall be at no cost to the Government. The Contractor will receive an additional incentive in the amount of \$2,000,000 for demonstrated reductions greater than 50% in MR for all of the models listed below. The Contractor shall incorporate all/any changes in time for delivery of PVT vehicles. The MR shall be determined through PVT assessed RAM scoring results.

	<u>MR*</u>
LMTV Cargo	0.0045
LMTV Van	0.0048
MTV Cargo	0.0076
MTV Dump	0.0073
MTV Van	0.0094
MTV Tractor	0.0054
MTV Wrecker	0.0069

*MR is expressed in maintenance man-hours per operating mile. It includes Unit, IDS and IGS maintenance. The lump sum payment shall be made at the end of each Program Year.

At the conclusion of PVT, incentives will be paid for each truck called up at that time, plus additional incentive, if earned. Subsequent obligations will be made at the start of each program year when trucks are called up, or when trucks are exercised through option provisions (Section H) and would be subject to milestones in the Performance Based Payment Schedule. This incentive is not subject to the Disputes Clause FAR 52.233-1.

C.3 System Technical Support (STS) (Cost-Plus Fixed-Fee Options).

C.3.1 The Contractor, for the period set forth in Section F of this contract, shall furnish the supplies and services to accomplish the Engineering, Configuration Management, Quality Assurance, ILS, Maintenance and related support effort associated with Government-initiated changes and improvements to the production vehicles and other efforts associated with the production and fielding of the FMTV. The Contractor shall serve as Custodian of the FMTV STS A1/A0 TDP for the duration of the contract. The Contractor shall use the original FMTV TDP, which will be provided at the Start of Work Meeting as the baseline STS TDP. The Contractor shall only update and revise the baseline STS TDP by incorporating approved change documentation, at the direction of the Government. The Government has unlimited rights to the baseline STS TDP and all update and revision documentation that is written against the STS TDP. At the end of this contract, the Government will be provided a complete copy of the STS TDP with all revisions incorporated in the Pro/ENGINEER CAD Solid Model format, and in *.pdf format. These efforts will supplement, and not duplicate, the requirements contained in Sections C.2 and E of this contract. The engineering and related technical support functions shall also apply to componentry of new model vehicles, other componentry and remaining engineering efforts applicable to the FMTV. These efforts shall be directed by the Contracting Officer through Work Directives. The Contractor is to perform NO effort unless the appropriate option(s) is exercised and a Work Directive (WD) authorizes the effort. These efforts shall be performed IAW all specifications, standards, regulations, drawings, guidance and DIDs as specified or developed under Sections C.2 and E of this contract, unless otherwise stated in the WD. The STS portion of this contract shall be priced out on a Cost Plus Fixed Fee basis. The Contractor shall be paid for only hours actually used. For payment information regarding cost and fee, see Section B. The Contractor shall not exceed the hours specified in a given WD unless expressly authorized by the Contracting Officer.

System Technical Support (STS) (See H.9 for option details)

C.3.1.1 Work Directives.

C.3.1.1.1 All work under this STS section shall be performed IAW work directives issued by the Contracting Officers Representative (COR) and approved by the PCO. Each work directive shall include the following information:

- (1) Work Directive number and Title
- (2) Reference to applicable paragraph # in Section C
- (3) Objective of the work to be performed
- (4) Maximum number of hours authorized
- (5) Detail description of work to be performed
- (6) Detail estimate of Other Direct Costs (ODC), including materials, purchased services, freight, travel, and other pertinent costs
- (7) Required completion date(s)
- (8) Relative priority of the work to be performed
- (9) Identification of applicable contract number, contractors name and address
- (10) Identification of any items deliverable to the Government.

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C.3.1.1.2 The Contractor shall notify the COR immediately by telephone and e-mail if the dates that work must be performed or data to be delivered will not be met. The Contractor shall follow-up with a letter to the PCO and COR.

C.3.1.1.3 The Government has the unilateral right to increase, decrease or prioritize the work to be performed by the issuance of Work Directives signed by the COR. It is understood and agreed that such adjustments shall be made within the general scope and level of effort of the contract and without equitable adjustment. The COR has the right to prioritize the work being performed under this STS clause.

C.3.1.1.4 If, at any time, the Contractor has reason to believe that the amount (hours and/or cost) which it expects to incur in the performance of a Work Directive are insufficient, the Contractor shall provide written notification to the COR for appropriate action. The Contractor shall furnish a revised statement of total hours and dollars to complete such work together with said notice. The Contractor shall not exceed any amount authorized for each individual work directive without the express written permission of the COR. Accordingly, the Contractor shall notify the PCO and COR when 75% of the allocated funds for that particular work directive have been expended or obligated IAW FAR 52.232-20 contained in this contract.

C.3.1.1.5 Electronic Work Directives. Work directives shall be generated in an electronic format and transmitted via electronic media that are mutually acceptable to the Government and Contractor.

C.3.1.1.6 Meetings. The Contractor shall be required to conduct reviews at the Contractor's facility, subcontractor/vendor facility or any Government facility when requested by the PCO through a work directive regarding a particular project. The contractor shall attend, take part in and prepare minutes IAW CDRL A031, if requested. An agenda shall be prepared by the contractor IAW CDRL A020 and coordinated between Government personnel and the contractor prior to contractor-hosted reviews. The following events shall be covered by these meetings:

- a. Start of Work Meetings
- b. Preliminary Design Reviews (PDR)
- c. Critical Design Reviews (CDR)

C.3.1.1.7 Weekly Significant Accomplishment Reports (SARs) - The contractor shall submit a weekly SAR including a significant action status for each open STS task IAW CDRL A057. For each task, there shall be a title, work directive and task no., vendor and Government COTR, description of action completed in the last week, action expected for the next month, and completion progress vs. schedule.

C.3.1.1.8 Monthly Cost and Performance Reports (CDRL A058) - The contractor shall submit monthly Cost and Performance reports IAW CDRL A058 (DID-DI-FNCL-80912) providing the status of hours and funds allocated and expended for each Work Directive. A weekly SAR is not required the week that the monthly report is submitted.

C.3.1.2 Technical Documentation. The Contractor shall establish an electronic interface for data exchange between the Government and the Contractors facility. The Contractor shall electronically submit all documentation required under this STS clause unless otherwise directed in the work directive. Unless otherwise stated, all technical data and reports shall be submitted by e-mail or other electronic means mutually agreed to by both parties. Data/Reports submitted by e-mail shall not exceed three megabytes (Mb) in file size. The File Transfer Protocol (FTP) shall not exceed 6 Mb. Data/reports over 6 Mb shall be transmitted on a CD-ROM via express mail. Proprietary data/export control data submitted by the Contractor may be submitted in electronic format. The Contractor shall attempt a test transmission to the Government of each type of file and/or electronic method and the Government shall verify receipt and successful transmission before achieving mutual agreement. This clause only applies to unclassified data.

C.3.2 STS Engineering Analysis: The Contractor shall provide the necessary engineering analysis and design capabilities to correct existing or potential design deficiencies, improve manufacturing cost effectiveness and/or reduce system cost. The Contractor shall be required to investigate technical areas related to engineering analysis with respect to proposals for engineering changes and attendant processes and methods. The Contractor shall perform these Engineering functions in the areas specified as follows:

a. Prepare calculations, layouts, drawings, sketches, schematics, charts and other visual depictions; recommend engineering change proposals; and, if approved, prepare engineering change proposals in accordance with CDRL A003 and Instructions for Preparing ECP Forms, Attachments 6 and Instructions for Preparation of Request for Deviation, Attachment 7.

b. With each proposed change package, the Contractor shall provide a 3D Solid Model in Pro/ENGINEER, Version 2001 of the affected parts and their assemblies. The Contractor shall provide 2D drawings of the affected parts clearly marked to identify the proposed change in a From - To condition. The marked drawings shall be provided in the same software as the change package (e.g. Microsoft, Adobe Acrobat). If the proposed change package is adding a new part for which a drawing or solid model does not exist, the Contractor shall provide a solid model and 2D drawing with their package. New drawings shall be Level III and prepared IAW ANSI Y14.5M, ANSI Y14.100, and ANSI Y14.24 per DI-SESS-81000B, CDRL A001. Solid models should be developed using the guidelines presented in the document titled 3 Dimensional Technical Data Package Configuration Management & Modeling Interim Operating Procedure for PM-FMTV provided as TACOM 3D TDP Interim Operating Procedure, Attachment 5 to this contract.

c. Prepare Engineering cost estimates for recommended design changes, prototype testing, and verification work, and

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preparation of TDP packages for use in competitive acquisitions.

d. Prepare engineering cost estimates for recommended design changes based upon procurement quantities, along with an estimated time for manufacture and installation.

e. Conduct structural analysis (stress analysis, finite element analysis, dynamic modeling, etc.) on parts, components and assemblages. The Contractor will conduct a quarterly reconciliation of the PMR and LSA/LMI databases.

f. Modify and fabricate parts, components and assemblages (including mock-ups and prototype versions) of future production related items.

g. Conduct trial installations and tests of the contract items (parts, components and assemblages), modification thereof and testing related to processes and methods required to evaluate form, fit and function of the item. Replacement parts shall be provided as necessary for evaluation, for required maintenance, for refurbishment and restoration of the contract item or modifications thereof during required testing.

h. Conduct system/design trade-off studies IAW CDRL A059, DI-ILSS-81021.

i. All design/design change outputs shall include, but not limited to, Design Failure Mode and Effects Analysis (DFMEA), design verification/validation plan, special product and process characteristics, product quality assurance provisions. At a minimum, the above outputs shall be included with all design change proposals. For guidance on DFMEA and other design outputs refer to Daimler Chrysler, Ford Motor Company and General Motors Supplier Quality Requirements Task Force Publications: Potential Failure Mode and Effects Analysis (PFMEA) Reference Manual, and Advanced Product Quality Planning and Control Plan (APQP) Reference Manual.

j. Provide engineering observer services relating to the contract item and data at Government specified locations. Such services shall consist of observations of Government and/or third party tests, attendance at technical meetings, field review of modified and/or failed contract items and technical assistance during vehicle fielding. The Contractor shall furnish a copy of all engineering accomplishments developed under the contract work directive.

k. MANPRINT considerations shall be incorporated into all work performed as part of STS.

C.3.3 All design changes/modifications, which affect the soldier-machine interface, shall be subjected to HFE analysis, simulation and/or testing. If degradation is likely to occur, appropriate actions shall take place to correct the situation or return the changed area to previous level of performance. Major modifications, which affect the soldier-machine interface (both operator and maintainer), shall include qualified HFE input to insure that the requirements of MIL-STD-1472 are met. HFE activities performed during this contract shall be reported under CDRL A060, DI-MISC-80508A. This report is required for any month where HFE problems are encountered or HFE efforts are expended.

C.3.4 Integrated Logistics Support (ILS)

C.3.4.1 When required by WD, the Contractor shall plan, manage, and execute logistics requirements and deliver a logistics support package including parts, provisioning data, technical data, training, and technical support, in support of FMTV A0, FMTV A1, FMTV A1 CR and Special Purpose Kits (ATPD 2131C, Attachment 1, Annex M), to include the XM1087A1 TRK, Expansibile Van and Government-generated ECPs. **

C.3.4.2 ILS Management Responsibilities. The Contractors ILS Manager will be the primary point of contact for the Contractor development of logistics products under the STS portion of the contract, as well as the Program Support portion.

C.3.4.3 ILS Management Control Log. The Contractor will maintain an ILS Management Control Log under STS as well as Program Support (contractor format, electronic file) (CDRL A032) with supporting documentation for Government review, as required, that tracks all changes to the production configuration baseline and subsequent ILS/LMI impact.

C.3.4.4 Dedicated ILS Hardware. When required by WD, the Contractor shall ensure that first production hardware is available for the development, validation and verification of the ILS package to include technical manuals. After the first production hardware is no longer needed, the Contractor will refurbish it and deliver it for fielding. Tools, consumable supplies, repair parts, and support equipment will also be provided as needed.

C.3.4.5 Logistics Demonstration (LD). The Contractor shall participate in/support LD efforts as required by WD.

C.3.4.6 System Support Package (SSP). The Contractor shall deliver a System Support Package (SSP) and SSP List as required by WD.

C.3.4.7 Logistics Management Information (LMI). When required by WD, the Contractor shall conduct a review of new operation and maintenance information for affected systems and insure that LMI is fully addressed in all ECPs and that LMI is maintained and delivered to the agreed upon baseline (CDRL A033, DI-ALSS-81530).

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C.3.4.8 Oil Analysis Report. The Contractor shall update the oil analysis report as required by WD IAW DI-MISC-80390, CDRL A035.

C.3.4.9 Provisioning Program. The Contractor will conduct a quarterly reconciliation of the PMR and LSA/LMI database and update the provisioning as required by WD and provide the following deliverables. ****

a. Logistics Management Information (LMI) Data Procedure/Provisioning Parts List (PPL) DI-ALSS-81529, CDRL A036, as provided as an Data Product Checklist, Attachment 15 in Section C.2.7.8.1.

b. Logistics Management Information Summaries/Pre-Procurement Screening (DI-ALSS-81530, CDRL A037).

c. Logistics Management Information Products/Supplementary Provisioning Technical Documentation (SPTD)/Drawings (DI-ALSS-81530, CDRL A038).

d. Special Equipment Tools and Test Equipment List (TTEL) (DI-ALSS-81529(T), CDRL A039).

C.3.4.10 Maintenance Allocation Chart (MAC). The Contractor shall update the MAC presently in the FMTV TMs to reflect changes as required by WD.

C.3.4.11 Unique ASL. The Contractor shall identify unique/changed ASL as required by WD.

C.3.4.12 Changes to Special Purpose Kits (ATPD 2131C, Attachment 1, Annex M). The Contractor shall identify any changes required to utilize the current Special Purpose Kits on the FMTV A1 as required by WD.

C.3.5 Publications Requirements

C.3.5.1 Technical Manuals. As required by WD, the Contractor shall prepare and include in the revised FMTV Technical Publications, any specified changes and corrections, and any updates resulting from Government-furnished ECPs, IAW CDRLs A043, A044, A045, A046, A047, A048, A049, A050, A051, A052, A061, A062, A063, A064, A065, A066, A067, A068, A069, and A070. All subparagraph TM-related support/deliverables shown below will also be provided, as required by WD.

FMTV Publications:

TM9-2320-365-10	LMTV Operator's Manual
TM9-2320-365-10-HR	LMTV Hand Receipt
TB9-2300-365-15	LMTV Warranty Technical Bulletin
TM9-2320-366-10*	MTV Operator's Manual
TM9-2320-366-10-HR	MTV Hand Receipt
TB9-2300-366-15	MTV Warranty Technical Bulletin
TM9-2320-365-20*	LMTV Unit Maintenance Instructions
TM9-2320-365-34*	LMTV Direct Support and General Support Maintenance Instructions
TM9-2320-365-24P*	LMTV Unit, Direct Support and General Support RPSTL
TM9-2320-366-20*	MTV Unit Maintenance Instructions
TM9-2320-366-34*	MTV Direct Support and General Support Maintenance Instructions
TM9-2320-366-24P*	MTV Unit, Direct Support and General Support RPSTL

*Multi-volume documents

FMTV A1 Publications:

TM9-2320-392-10	MTV A1 Operator's Manual
TM9-2320-392-10-HR	MTV A1 Hand Receipt
TB9-2300-427-15	MTV A1 Warranty Technical Bulletin
TM9-2320-391-10	LMTV A1 Operator's Manual
TM9-2320-391-10-HR	LMTV A1 Hand Receipt
TB9-2300-426-15	LMTV A1 Warranty Technical Bulletin

FMTV A1 Interactive Electronic Technical Manual (IETM).

IETM Contents

TM9-2320-392-10	MTV Operator's Manual
TM9-2320-392-10-HR	MTV Hand Receipt
TB9-2300-427-15	MTV Warranty Technical Bulletin
TM9-2320-392-20	MTV Unit Maintenance Instructions
TM9-2320-392-24P	MTV Unit, Direct Support and General Support Maintenance Repair Parts and Special Tools List

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TM9-2320-392-34	MTV Direct Support and General Support Maintenance Instructions
TM9-2320-391-10	LMTV Operators Manuals
TM9-2320-391-10-HR	LMTV Hand Receipt
TM9-2300-426-15	LMTV Warranty Technical Bulletin
TM9-2320-391-20	LMTV Unit Maintenance Instructions
TM9-2320-391-24P	LMTV Unit, DS and GS RPSTL
TM9-2320-391-34	LMTV DS and GS Maintenance Instructions
TM9-2330-394-13&P	LMTV/MTV Trailer Manual

Generic Publications:

NMWR 9-2300-XXX	National Maintenance Work Requirement for Family of Medium Tactical Vehicles (FMTV A0, FMTV A1,) Crane, CDRL A065
NMWR 9-2300-XXX	National Maintenance Work Requirement for Family of Medium Tactical Vehicles (FMTV A0, FMTVA1,) Engine, CDRL A066
NMWR 9-2300-XXX	National Maintenance Work Requirement for Family of Medium Tactical Vehicles (FMTV A0, FMTVA1) Transmission, CDRL A067
NMWR 9-2300-XXX	National Maintenance Work Requirement for Family of Medium tactical Vehicles (FMTV A0, FMTVA1) Cargo Winch, CDRL A068
NMWR 9-2300-XXX	National Maintenance Work Requirement for Family of Medium tactical Vehicles (FMTVA0, FMTVA1) Axles, CDRL A069
NMWR 9-2300-XXX	National Maintenance Work Requirement for Family of Medium tactical Vehicles (FMTV A0, FMTV A1) Self-Recovery Winch, CDRL A070

C.3.5.1.1 Validation Plan. When required by WD, the Contractor shall update the Validation Plan in accordance CDRL A050 and Validation Certification IAW CDRL A047, DI-M-2196.

C.3.5.1.2 Technical Manual Status And Schedules - When required by WD, Technical Manual/IETM status and schedules shall be furnished IAW DID DI-M-6155 (CDRL A048).

C.3.5.1.3 Technical Manual Cost Report - When required by WD, the Contractor shall provide a Publication Cost Report IAW DID DI-FNCL-80729 (CDRL A049). This report must accompany any final reproducible copies (FRC) (previously FDEP) to which it applies. Electronic files of the TMs/IETM Cost Report shall also be delivered by the contractor at the time of submittal.

C.3.5.1.4 Technical Manual Validation. When required by WD, the Contractor shall conduct TM/IETM Validation.

C.3.5.1.5 Publications Quality Assurance Program.

C.3.5.1.5.1 The Contractor shall correct all errors found in the SGML instance and graphics during verification, at no additional cost to the Government. After Government receipt of the product, the Government reserves the right to require the Contractor to correct all errors found in the manuscript at no additional cost to the Government within 15 days of Government notification.

C.3.5.1.5.2 Warranty of Logistics Data (see H.5.2.6).

C.3.5.1.5.3 Technical Manual Verification. The Contractor shall support verification of preliminary technical manuals (previously DEPs) and IETM as required by WD. All verification findings shall be incorporated by the Contractor in the Final Reproducible Copies (TMs and IETM) and made available for Government review. The Contractor shall not incorporate any changes/corrections to any TMs/IETM without the knowledge and approval of the Government. Any such additions to any TMs/IETM will impact the acceptance/rejection of subject TMs/IETM.

C.3.5.1.6 Publications Review. Publications will be reviewed, after Verification, by the Government for technical accuracy, editorial accuracy, compliance with guidance, completeness, usability, accuracy, consistency and usability by the target audience. The Government will provide comments, in writing, on the results of each review within approximately 60 days.

C.3.5.1.7 Publications Final Delivery. When required by WD, the Contractor shall deliver IAW CDRLs A043-A046, A051 & A052.

C.3.5.2 National Maintenance Work Requirements (NMWR). When required by work directive, the Contractor shall prepare National Maintenance Work Requirements (NMWRs) publications IAW CDRLs A065-A070, for FMTV engines (to include OEM installed engine accessories), transmissions, axles, cranes, cargo winches, and self-recovery winches. The NMWRs will include all necessary information so that the above assemblies, their subassemblies and all their accessories can be disassembled, and reconditioned. All parts are to be cleaned and stripped of paint, corrosion, and rust. All parts shall be thoroughly inspected. Worn or damaged parts shall be replaced. When using other than OEM parts, the parts must be able to be repaired or replaced using the existing procedures, tools and repair parts specified in the FMTV technical manuals, and must meet or exceed OEM specifications. All engines and transmissions will be rebuilt to their original configuration. The transmission shall be tested on a transmission test stand to insure like new performance. Axles must

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operate without evidence of unusual noise, vibration. Cranes will be load tested and stenciled IAW TM 9-2320-366-34 and IETM 9-2320-392-34.

C.3.6 Maintenance Technical Representative (MTR) (Option- See H.9)

C.3.6.1 When the appropriate option(s) is exercised and required by work directive, the Contractor shall provide qualified CONUS and OCONUS Maintenance Technical Representatives who shall advise and make recommendations to orient and instruct Government personnel with respect to operation, maintenance, repair and Contractor parts supply for the end items, including all components. This does not include work required to support contractor warranties, contractor retrofits, or any activities that are the sole responsibility of the Contractor. The maximum amount of this effort is for 15,600 mandays CONUS and 6000 mandays OCONUS spread over 5 years.

C.3.6.2 Details for meeting the above requirements will be provided in a WD.

C.3.6.3 The Contractor shall make available all required personal vital statistics related to the representative(s) furnished under this provision, including birth certificate and such evidence as is requested by the installation or area in which services are to be performed.

C.3.6.4 The PCO, at least 15 days, for major assignments, in advance of the date the Maintenance Technical Representative(s) are required, shall designate the times, installations, activities, and areas within which the services will be performed. For minor assignments for a few days, the notification from the PCO need be only 3 days in advance. The Fielding Team Chief shall provide the actual instructions for the MTR at the Fielding site, a representative of the Government Logistics Fielding Office. If the Fielding Team is not at the site, the MTR will take direction from PM/TACOM Logistics. Top priority will be knowing status/assisting with deadlined vehicles.

C.3.6.5 The unit prices for the MTR man-days are inclusive of an 8 hour day, transportation costs, subsistence, lodging and incidental expenses. The Government will pay travel costs for one round trip home visit per year. Only U.S. federal holidays will be paid by the Government other than actual days worked. Vacation and other holidays and sick leave are solely between the Contractor and his employee. The Government is responsible for actual days worked by any qualified Maintenance Technical Representative. It is not required that the same consultant completes an assignment. Any emergency leave is solely between the Contractor and his employee.

C.3.6.6 A man-day of service includes but is not limited to:

- a. Any period during which the Maintenance Technical Representative is delayed or prevented from performing any task only if the delay or non-performance is solely the fault of the Government.
- b. The initial travel time from the Contractors facility to the site of work, for travel between sites of work and to the Contractors facility.
- c. Any time that the Maintenance Technical Representative is preparing required reports, provided that such preparation is performed at the site of work; the time involved in the report may be monitored and verified by the Government.

C.3.6.7 Invoices for reimbursement for service shall carry the Contractors certification of the actual man-days services performed. The invoices shall be forwarded to the Administrative Contracting Officer (ACO) for verification of payment. The Contractor shall document invoice with copies of actual Maintenance Technical Representative time sheets showing what portion of the time was devoted to technical assistance activities versus other activities which are the sole responsibility of the Contractor. The Fielding Team Chief will sign off on these time sheets.

C.3.7 Quality Assurance Requirements.

C.3.7.1 Quality System: All Contract Quality requirements shall apply to STS products and services provided under this Contract.

C.3.7.2 Quality Engineering Reviews: The Contractor is responsible for auditing and assessing the performance of its STS Quality System/Procedures. The Contractor shall perform quality engineering reviews of all TDP documentation affected by a Work Directive. These reviews are for determining the type and frequency of process/product controls and/or the required tests for performance/validation/production control necessary to achieve a cost-effective, consistently produced quality product. The contractor shall perform quality engineering reviews at a point in time, which shall assure that the resulting recommended controls and tests are processed and reflected in the design change documentation and subsequently, the TDP. Required process/product controls and tests shall be defined as product/part drawing Quality Assurance Provisions (QAPs) or within specifications referenced by the TDP.

C.3.7.3 Quality Assurance Provisions: Quality Assurance Provisions (QAPs) are those provisions/notes on engineering drawings which annotate quality assurance requirements associated with product/process testing, production quality control, major characteristics, and critical safety items. QAPs shall be developed or updated as necessary for all applicable items, components or assemblies affected by a Work Directive. Developing and updating of QAPs shall be based on the recommendations of the Quality Engineer review. When developing QAPs, considerations shall be made towards achieving a cost-effective, consistently produced quality product. Limit the use of

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specialized test and inspection equipment to only when necessary.

C.3.7.3.1 QAP Determination: QAPs may be determined/identified using techniques such as Potential Failure Mode and Effects Analysis (PFMEA), historical data review of field failures and non-conformances noted during component qualification testing and manufacturing, logistic support analysis data review, Reliability-Availability-Maintainability-Durability (RAM-D) data review, design engineering assessment, safety assessment and hazard analysis, and sound engineering judgment and experience.

C.3.7.3.2 Master QAP List (MLQAP): The contractor shall develop and maintain a MLQAP for all QAPs associated with any work directives. The MLQAP shall provide a complete accounting of QAPs on all drawings. It is suggested that Quality Engineering maintain the MLQAP.

C3.7.4 QAP Categories: QAPs are categorized IAW the following:

1) First Article Test (FAT) Requirements - Tests conducted on first production lot samples to represent the entire quantity of items produced by the established process. When a FAT is to be specified on the engineering drawing, all performance data shall be provided on the drawing. This data shall be provided either directly (by engineering drawing notes) or indirectly (by recognized standards described in drawing notes) that are referenced by the FAT notes. FAT requirements shall be applied to engineering drawings when any of the following conditions requires verification:

- When performance characteristics are to be evaluated by testing. Example: Durability, Environmental, Functional, or tests otherwise destructive in nature.

- When environmental or process control characteristics are required to be evaluated by testing, Example: Salt spray, Climatic conditions (temperature extremes) and other tests such as X-ray.

- When fit or interface of an item is to be demonstrated. Example: canvas items, special accessory kits (winterization, heater, deep water fording, and Arctic kits).

- When the item has been evaluated via Component First Article Test (CFAT) and requires additional tests controlled by lot or time between production runs.

2) Production Quality Control - The selection of the number of units and frequency of test/inspection requirements in drawing notes. These shall be established on a sound statistical basis and with good Quality Engineering judgment.

3) Critical Safety Item (CSI) - The Contractor shall identify Critical Safety Items (CSI) within the TDP for all new designs/design changes that are a result of a Work Directive. Critical safety items are items with one or more critical safety characteristic(s). A critical safety characteristic is a feature, that if non-conforming, could result in a catastrophic failure of an item/assembly that could result in loss of life or injury to humans. Items which can not be redesigned from a practical standpoint shall be brought to the attention of the PCO and COTR as soon as possible. At the PCO's or COTR's discretion, the Government may authorize the Contractor to identify the feature or characteristic on the drawing as a critical safety item IAW CDRL A071, DI-SAFT-80970A and the Work Directive.

a. Requirements pertaining to Critical Safety Items shall be validated to ensure all critical safety aspects of the design are accurately reflected, parts/materials operate well below fatigue limits/stress levels, and the design allows for assessment by inspection and nondestructive test equipment. Validation shall be based on engineering analysis of the critical safety item characteristics and shall consider changes/deterioration through time or use, fatigue life, and operating conditions. A master list of Critical Safety Items and associated critical characteristics, including nomenclature and part number, shall be prepared, maintained and documented by the Contractor. The Critical Safety Items List shall be maintained and updated throughout the life of the contract. The Critical Safety Items shall also be referenced on the vehicle class and division drawing. This list shall be dynamic in nature with changes taking place as experience and knowledge are obtained and design changes are incorporated.

b. Each critical safety item and assembly process shall be clearly identified as such on the engineering top drawing, part drawing and/or assembly drawings. The critical safety characteristic(s) for each critical safety item shall also be clearly identified as such on the engineering part and/or assembly drawing, and in all Quality Assurance Requirements/Quality Assurance Provisions. Critical Safety characteristics will require one hundred percent (100%) inspection or, a minimum Cpk/Ppk of 1.66. Alternate requirements/techniques may be used such as PPM or DOE when developing Quality Assurance Requirements/Quality Assurance Provisions, but must be approved by the government. The specific method for marking drawings shall be as delineated in DOD-STD-00100D(AR).

4) Major (M) - Any characteristic, other than a critical safety characteristic in which a common defect could cause complete physical and functional failure, or affect interchangeability, reliability, or maintainability of the item or its repair parts, or effective use of operation.

a. Major characteristics are often determined using sound engineering practice and judgment. Criteria which may be the determining factor that defines a characteristic as Major may include but are not limited to:

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- Performance requirements specified on product drawings except those that involve destructive tests or that require 100% inspection.
- Drawing dimensions and geometric characteristics (usually 0.005" or less) such as position tolerance, concentricity, angularity or perpendicularity or tolerance greater than 0.005 where the application is very important.
- Electrical and Electronic characteristics (circuitry, resistance, crimping, soldering, continuity, functional dimensions).
- Installations involving an interface with hardware requiring a fit or pattern dimensions such as a flange or a bracket.
- Material specifications such as hardness, surface hardness depth, location of surface hardness, surface finish. Surface texture values of 32 micro-inch and finer, related waviness, and lay values.
- Thread characteristics, class 3, 4 and 5, or torque requirements.
- Fastening requirements (welding, brazing, staking, bonding) affecting reliability, interchangeability or function.
- Gear and spline dimensions that affect function and interchangeability.

C.3.7.5 When required by a Work Directive, the Contractor shall evaluate Environmental Stress Screening (ESS) procedures, if any, that are required by the Technical Data Package to determine their adequacy and cost effectiveness. The procedures shall be updated and modified, as is necessary depending on the results of validation testing and/or Engineering Change Proposal actions. Upon approval of the individual Quality Assurance Provisions, the Contractor shall implement the screening procedures.

C.3.7.6 Quality Documentation: When required by a Work Directive, the Contractor shall develop and maintain additional documentation beyond that required by contract and the contractors quality system.

C.3.8 Configuration Management (CM). All configuration management tasks are to be done only when authorized by Work Directive. Under this clause, the Contractor shall be the custodian of the Government FMTV TDP. This TDP consists of all drawings and associated documents developed for the FMTV A1/A0 variant configurations. Only those changes directed by the TACOM FMTV CCB will be incorporated into the FMTV Government TDP. Upon notification of the TACOM FMTV CCB approval, the data files and drawing levels will be locked.

C.3.8.1 Configuration Control:

C.3.8.1.1 The Contractor shall prepare Engineering Change Proposals (ECPs), IAW CDRL A003, DI-CMAN-80639C(T), the instructions provided in this clause and Instructions for Preparing ECP Forms, Attachment 6.

C.3.8.1.2 ECP/VECP/ERR Number Assignment - The Contractor shall utilize a portion of the block of numbers requested per paragraph C.2.2.1. The same number assigned to an ECP/VECP shall be used for the applicable ERR without the R* identifier, where the * is the number of revision(s), if one was assigned.

C.3.8.1.3 Data files and proposed drawing revision levels will be temporarily locked upon the Contractors CCB approval prior to being submitted to the Government for final approval.

C.3.8.1.4 The contractor shall not incorporate any changes to the FMTV technical documentation within their control without receiving an approved ECP from the Government.

C.3.8.1.5 For Interface Control ECPs, the Contractor shall attempt to obtain concurrence from all interface parties and include their (non) concurrences as part of the ECP package.

C.3.8.1.6 Each new 3-D solid model/2-D line drawing will be approved for design, drawing format, and quality requirements by the Government before approval of the ERR releasing the new documentation to the FMTV TDP.

C.3.8.2 Change Documents from Other Sources. As STS Contractor, the Contractor, shall receive from the Government, ECPs/VECPs/RFDs prepared by other sources. The Contractor shall review these proposed change documents for overall adverse system impact. The Contractor shall, in an appropriate text format provide concurrence/non-concurrence (with justification for any non-concurrence) and applicable comments/recommended changes to the Government Configuration Management Office electronically for review at the Government Configuration Control Board meeting.

C.3.8.3 The Government will forward approved ECPs/VECPs/PPEPs to the applicable drawing custodian for incorporation of the approved change and preparation of the ERR package. As drawing custodian of the FMTV technical data package you shall receive approved ECPs/VECPs/PPEPs from the Government for incorporation to the FMTV TDP. The Contractor shall prepare and submit an ERR package within

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30 days of receipt IAW C.3.8.4. An ERR package shall consist of the revised Pro/ENGINEER Solid model, Pro/ENGINEER 2-D drawing, the ERR, and applicable configuration metadata for the ECP and ERR.

C.3.8.4 Engineering Release Record (ERR) Preparation - The Contractor shall prepare one ERR for each approved ECP/VECP/PPEP, initial release of an assembly or TDP in accordance with the instructions in Instructions for the Preparation of an Engineering Release Record, Attachment 19 and CDRL A072, DI-CMAN-80463C(T). Multiple ECP releases under one ERR will not be accepted. The ERR number shall be the same as the ECP number. If the Contractor was not the ECP preparer the Contractor shall substitute their prefix in front of the ERR number.

C.3.8.4.1 Supplemental ERRs - Incremental ERRs for assemblies or subassemblies may only be used for the initial release of a major vehicle or system, unless Government Configuration Management approval is granted.

C.3.8.4.2 Submittal of ERRS - The Contractor shall submit the ERR package consisting of the revised Pro/ENGINEER Solid model, Pro/ENGINEER 2-D drawing in *.pdf format, the ERR in *.pdf format, and applicable CSAER input metadata for the ECP and ERR to the Government electronically per CDRL A072, DI-CMAN-80463C(T).

C.3.8.4.3 Upon receipt of Government approval of the ERR package, the Contractor shall provide to all known co-users and applicable DLA agencies in *.pdf format, an electronic copy of the approved ERR, approved ECP/VECP/PPEP, and the changed document(s) (2-d drawings and associated technical documents) IAW CDRL A072, DI-CMAN-80463C(T), within 10 days of receiving notification of the approved ERR package.

C.3.8.5 Configuration Status Accounting & Engineering Records (CSAER).

NOTE The Government is changing from TDCMS to an on-line web based configuration management system. The Contractor's submittal software format for this web based system is being developed by the Government. Contractors submittal format is to be on-line or batch metadata. Until the contractors batch submittal format is available, on-line submittal will be used.

C.3.8.5.1 CSAER Submittal & Validation - Contractors quality provisions shall assure that accurate and complete CSAER on-line computer input metadata is provided. The Contractor shall be able to access the on-line system via personal computer via the internet. The Government shall provide training on how to access and input metadata on line. The metadata shall define the detail part records, the part, assembly, and vehicle configurations, and change/release records as result of ECPs/VECPs/RFDs/PPEPs. The Contractor shall submit with each ECPs/VECPs/RFDs/PPEPs/ERR, the metadata to create/update/revise the FMTV configuration metadata for each part, assembly, vehicle configuration affected by the change document. Submittal of CSAER data to institute a complete and permanent audit trail history of Product Baseline drawings/documents including subsequent changes to that baseline shall be the responsibility of the STS Contractor. The media used to input CSAER data shall be web based on-line access or batch metadata submittal when available. Password and security clearance may be required to access the on-line system. The Contractor shall contact the PM, Configuration Management who will contact a TACOM Information Assurance Security Officer (IASO) who will assist in completing and submission of the forms. The Contractor needs to provide completed security investigation paperwork to TACOM Intel and Security Division, ATTN: AMSTA-CM-XSC (Gayle Bedwell) (586)574-6262. The Contractor will also need to provide accreditation/certification of their site to TACOM-Warren Information Assurance, Contact the TACOM-Warren IA Team, Steve Twynham, (586)574-4117 or Jack Ciraulo, (586)574-8431.

C.3.8.5.2 CSAER Data Correction - When the CSAER data input, provided to the Government, the Government may return the total CSAER package containing the non-conforming data to the Contractor for correction. Upon Government direction, the Contractor shall prepare and submit a status report, identifying problems in Contractors CSAER process or Contractors database and the plan for corrective action. This report shall be in contractor format.

C.3.8.5.3 CSAER Validation - The Contractor shall be responsible for review, edit, and correction if CSAER errors resulting from our audit of your generated metadata input. The Government will provide the Contractor with reports generated by the on-line CSAER database. The Contractor shall electronically resubmit a corrected package within 14 working days and at no cost to the Government. Periodically the Government will provide you with baseline or bill of material reports, (at assembly level or vehicle level) generated. The contractor will correct all deficiencies noted in these TDPLs and submit corrective data within 14 working days.

C.3.8.5.4 Configuration Status Accounting Report - The Contractor shall submit a monthly Configuration Status Accounting Report for all changes (regardless of origin) affecting the FMTV. The report will be in ECP number order and shall at a minimum provide the following data:

Detailed description of the ECPs/VECPs/PPEPs in process/completed/cancelled; ERRs in process / completed / cancelled; and DWOs in process / completed/cancelled. The report shall identify when the document arrived at each pertinent stage of processing, such as initial start, PDR, CDR, contractor CCB, submittal to Government, Government CCB Date and decision type, ERR development and submittal, implementation to the technical manual and provisioning data, production line cut-in, contract modification, etc.

C.3.8.5.4.1 A separate section of the same report will document the status accounting information for RFDs. Applicable fields identified above will be used. The report will also track RFDs that are converted to ECPs.

C.3.8.5.4.2 The report shall be in Microsoft Office 97 format or equivalent mutually acceptable program and transmitted to the

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Government electronically IAW CDRL A073, DI-CMAN-81253A.

C.3.9 Engineering Drawings

C.3.9.1 Engineering Drawings, Product Drawings and Records - The Contractor shall provide Product Design Drawings as described in MIL-STD-100G and IAW CDRL A001, DI-SESS-81000B, ASME Y14.100M-1998 and ASME Y.14.24M. It is essential that the drawings be in compliance with the ordering data as defined in Para C.3.9.13 of this SOW. Detail, subassembly and assembly drawings shall be completely delineated, directly or by reference to other documents, engineering requirements and characteristics such as materials, tolerance methods shall be utilized where applicable per ANSI 14.5M-1994. Engineering drawings and associated lists prepared, shall as a minimum, provide the necessary design, engineering, manufacturing, and quality assurance information sufficient to procure or manufacture an item that duplicates the physical and performance characteristics of the original prototype, without additional design engineering effort or recourse to the original design activity. The Contractor shall deliver all new drawings and redraws (of old drawings) in Pro/ENGINEER 3-D Version 2001 IAW C.2.1.1.4. Quality Assurance Provisions shall be included on the drawings and not be separate from the drawings. The QAPs shall note the type and frequency of process/product controls and/or required test for performance/validation/production control purposes. Container drawings for the engine and transmission shall also be provided as product drawings defined herein. Vehicle top assembly drawings, camouflage drawings, kit drawings, and TACOM peculiar drawings shall also be provided.

C.3.9.2 Engineering drawings and associated lists prepared shall be legible and include those types of drawings most amenable to the mode of presentation. Layout drawings and combinations of types of engineering drawings may be used to convey the engineering end item to cognizant Government engineers and scientists and enable competitive procurement or fabrication of the end item. Detail assembly drawings for welded components and other inseparable assemblies are acceptable where each piece is detailed thereon and none of the individual pieces are provisioned as spare or repair parts.

C.3.9.3 Source Control Drawings (SOCD) shall be prepared only upon authorization from the Government. All SOCDs shall have a minimum of 2 sources as well as meet the requirements defined by MIL-STD-100G, unless otherwise directed by the PCO. Requests for authorization to use SOCDs shall be accompanied by a copy of the Non-Standard Parts approval request (DD Form 2052) and written justification set forth in DID DI-SESS-81000B (CDRL A001).

C.3.9.4 Dressed Components. Contractor shall provide dressed component drawings for the engine, transmission, axles and transfer case if applicable. A dressed component is a properly manufactured, assembled and tested set of parts, subsystems and assemblies that are complete for installation in the vehicle delivered under this contract. Dressed component drawings shall identify all sprockets, pulleys, mounts and other add-ons that adapt the component to the vehicle installation. The dressed component drawings shall be complete in assembly and detail to allow procurement of the dressed component.

C.3.9.5 Review/Sign Off - 2-D line drawings and corresponding 3-D solid models shall be provided to the Government for review by installation at a rate sufficient to allow for the initial review by the Government, coordination of Contractor corrections and Government Final Review and Sign-off. After Government sign-off of a drawing the Contractor shall record in the change block of the drawing any subsequent changes made to the drawing. All changed drawings and change notices shall be submitted to the Government for review.

C.3.9.6 Drawing Approval. Drawings shall be approved by PM MTV Engineering personnel. The Government must approve any exception to this requirement in writing. The Government Project Engineer shall provide approval by signing drawings or by providing electronic or written approval by a means acceptable to the Government and contractor. The Government QA Specialist shall provide approval by signing drawings or by providing electronic or written approval by a means acceptable to the Government and contractor.

C.3.9.7 Drawing Number Report - All product drawings including Package Content and Kit drawings produced under this contract shall be assigned Government issued drawing part numbers. These drawing/part numbers can be obtained by submitting a written request to TACOM, ATTN: AMSTA-TR-E/FMTV specifying the type and quantity of drawings being produced, i.e., and kit or product drawings. The allocation of these numbers shall be reported on a frequency specified on the DD Form 1423. This report shall be prepared IAW DI-SESS-81011 (CDRL A074) and include the contractor's name, address and contract number and manufacturer part number. A cross-reference list shall be provided showing the Government (TACOM) part number and the corresponding vendor part number.

C.3.9.8 Drawing Part Numbers for Privately Developed Items - Contractors are prohibited from assigning drawing/part numbers to privately developed items prior to Government approval. If an item is approved for incorporation into the design, the contractor shall assign a Government issued drawing number, as referenced in part C.3.9.7 to the item.

C.3.9.9 Drawings and Pro/ENGINEER 3-D Solid model files prepared for items developed with funds of this Contract or any other Government contract by the Contractor or his subcontractors are property of the Government and shall be provided with unlimited rights to the extent permitted under DFARS 252.227-7013, DFARS 252.227-7014, DFARS 252.227-7015. The Contractor shall present the list of exceptions, those existing drawings and model files developed at private expense as part of the Work Directive.

C.3.9.10 Drawing Custodianship - The contractor shall be responsible for all original document files in his possession (this includes but is not limited to 3-D Pro/ENGINEER Solid Models, 2-D line drawings, associated documents, technical documentation etc.). As drawing custodian, the contractor shall make any changes authorized by TACOM to said original document files, provide copies of the changed

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document files to co-users and upon request, provide document files as defined herein, electronic files in one of the file formats identified below to the Government within 10 days of request. The contractor shall not transfer any Government drawing files without written approval from the Government.

1. 3-D Pro/ENGINEER Version 2001
2. Associate 2-D Line Drawing in Pro/ENGINEER Version 2001
3. Associate 2-D Line Drawing in *.pdf Format
4. Associate STEP Neutral File Format
5. All Associated sheet images in *.pdf format

C.3.9.11 Drawing Custodianship List - The contractor shall prepare and submit a drawing custodianship list IAW CDRL A075. The list shall contain all original drawings and associated documents pertaining to this contract. The list shall identify pertinent descriptive information such as number, type of document, title, current revision level, date and status, etc. Specific media format is to be determined at a start of work meeting.

C.3.9.12 Procedures for Transferring Original Drawings and CAD files - The Contractor shall comply with the following sequential procedures at the end of the performance period of this contract.

1. At 60 days before end of contract:

a. Provide a list/printout of drawings, CAD files and packaging documents in your custody to TACOM, AMSTA-TR-E/FMTV for record verification.

b. Identify and provide a list of approved, but open ECPs (i.e., where no ERR/drawing/file updates have occurred) and cross-reference to drawings/files/documents affected by those ECPs. Separate, revise and ship separately. NOTE: If TACOM is to complete the work, drawings/files/documents should be prepared for audit and shipment first.

c. Provide lists of the following information to AMSTA-TR-E/FMTV: (1) Obsolete and superseded drawings and CAD files, and (2) unreleased drawings, CAD files, and packaging documents.

2. At 30 days before end of contract, document the transfer of data by using two letter of transmittal forms, one for obsolete drawings and CAD files, and one for all other drawings, CAD files, and packaging documents. Attach related inventory lists to each DD Form 250. Submit to the Government representative for signature and verification of receipt. Data to be transferred shall accompany the transmittal letter. Data transfer is to be electronic IAW C.1.4 or as otherwise specified. The Government reserves the right to be present during the drawing / file inventory process.

C.3.9.13 Engineering Drawing Ordering Data:

The Contractor shall prepare Product Design drawings as appropriate IAW the ordering data in this SOW and the tailoring of MIL-STD-100G as follows:

a. Drawing Media: Digital Data as defined herein. Paper copies and raster file digital data are required for government review purposes prior to Government acceptance of drawing files defined under C.3.9.5 and C.3.9.6 .

b. Drawing Format: Government Format, forms supplied by the contractor.

c. Drawing Sheet Size and Format IAW ASME Y14.1.M.

d. Drawing Reference to MIL-STD-100G will be made on the drawing, including applicable revision levels, and notices, indicated in note 1.

e. Application Block Data Required on drawing, general use or multi-use notations are allowed, e.g. FMTV/A1, FMTV-A1 where applicable. More specific uses are to be identified by groups or models, i.e., MTV-A1, LMTV/A1, Tanker, Air- Drops.

f. Drawing Detail, multi-detail is encouraged for inseparable assemblies. Mono-detail and tabulated drawings are allowed.

g. Dimensioning and Tolerancing shall be IAW ASME Y14.5M.1994 for new drawings and indicated in note 1. Metric and decimal are allowed. Dual dimensioning requires government approval.

h. Drawing notes shall be on top left corner beginning with note 1 on top.

i. Quality Assurance Provisions shall be integral to the drawing, as specified herein.

j. Types of drawings are approved by the Government.

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k. Maintenance of multi-sheet drawings are revised by sheet, with first sheet containing the latest revision level, revised when any sheet is revised.

l. Redrawn drawings require government approval and are advanced one revision level.

m. Maintain revision history in its entirety with brief description of change, document change number and zone cross-references to change area.

n. Adding sheets, renumber sheet using consecutive whole number.

o. Deleting sheets, remaining sheets are renumbered, revision status of sheets block is updated with notations such as cancel or del.

p. Markings on Engineering Drawings, special items and process apply using approved symbols and special notes.

q. Associated lists are not required.

r. Types of associated lists not required.

s. Angle of projection shall be third angle unless otherwise indicated in title block.

t. Language shall be English.

u. Miscellaneous: Distribution statement required and approved by government; Material shall be defined in note to applicable specifications and standards; Drawing numbers are assigned by TACOM; Revision method requires Government approval; Contractor materials engineer, drafter, checker, and engineer shall all sign drawings.

C.3.9.14. Drawing Features Summary from the blocks on form DD2554-1 for Product Drawings:

1.a. Originals: CAD files IAW C.2.1.1.1.4.

1.b. Reproductions: IAW Mil-D5480, type A, class 3.

1.c. Digital Data: Electronic deliveries as specified herein.

2. Cage code and documents numbers:

2.a. Contractor NA

2.b. Government: Use 19207 cage code and TACOM drawing numbers IAW the Configuration Management section of this contract.

3. Drawing formats and drawing forms

3.a. Contractor formats NA

3.b. Government formats supplied by contractor

4. Types and quantities of drawings selection

4.a. Contractor selects NA

4.b. Government selects

5. Associated lists: Separate parts list is not allowed; find number parts lists require Government approval.

6. Details

6.a. Multi-detail drawings only permitted for inseparable assemblies.

7. Quality Assurance Provisions required to be integral with the drawings as specified herein.

8. Applicable Vendor Substantiation Data required.

C.3.9.15 Drawings & TDP Requirements

C.3.9.15.1 Drawing Tree - The contractor shall establish and maintain a drawing tree reflecting the top/down generation breakdown of the FMTV models IAW DI-DRPR-80558 (CDRL A076). The drawing tree shall include all separable assemblies, items requiring component specifications, and software. The drawing tree shall serve as a guidance for structuring the TDPL and Logistics Support Analysis Record (LSAR) for FMTV. The drawing tree shall be made available for design and other disciplines' review.

C.3.9.15.2 Documentation - The contractor shall provide engineering and technical support services and facilities to prepare and maintain drawings, specifications and other technical data comprising the configuration baseline for the FMTV.

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C.3.10 Field Issue Resolution.

C.3.10.1 Field Issue Resolution. The Contractor shall investigate, provide failure analysis and corrective action to all Field Issues generated against supplies produced under this contract in accordance with this provision and as authorized via STS work directives. Field Issues will be identified by the PCO and may originate from various sources including, but not limited to, Field Service Representative reports, Government Logistics Assistance Representative (LAR) reports, Fielding Team reports and Soldier input. The Contractor shall provide a report of the investigation, which includes at a minimum: problem identification, root cause, immediate/short term action, corrective action implementation plan for permanent solution, and verification of effectiveness. The report of investigation shall be submitted within 45 calendar days of receipt of a Contracting Officers notification of Field Issue. Should an exhibit of the item in question be required, the Contractor shall submit an exhibit request electronically to the Contracting Officer. Upon receipt of the request, the Contracting Officer will electronically delegate exhibit processing to the appropriate Administrative Contracting Officer (ACO) representative within 48 hours of request receipt. The ACO representative will arrange for transportation of exhibit(s) with the Contractor. The cost of exhibit transportation shall be the responsibility of the Contractor. All corrective actions taken by the Contractor shall be at no additional cost to the Government. Field Issue corrective actions which require a configuration change, must be approved by the PCO. All Field Issue investigation reports and associated corrective actions shall be approved by the PCO before the Government considers a Field Issue Notification closed.

C.3.10.2 Field Issue Response Performance Incentive. The Contractor is incentivized to provide rapid and accurate responses to Field Issues. The Government will award the Contractor an incentive amount of \$500 for each Field Issue response submittal which is received within 30 calendar days and is subsequently approved without revision or additional effort. Time/days associated with exhibit shipment does not count towards the Investigation Report submittal time/day requirements stated in C.2.11. The Government shall limit this incentive to \$150,000 per production year. The determination of the award of the incentive amount specified in this clause will reside solely with the PCO and is not subject to the Disputes clause (FAR 52.233-1). The contract will be modified on a semi-annual basis to fund the amounts determined to be earned or such other frequency as may be mutually agreed upon.

C.3.11 Reduced Logistics Footprint. The existing logistics footprint of the FMTV shall be reduced to the lowest size possible and initiatives to achieve this objective will be authorized via STS work directives. Target areas are a 30 percent improvement in the baseline vehicle fuel economy, reduction or elimination of the number of intermediate level maintenance tasks required, reduction of all tools required and a reduction of scheduled services required. Block Modification for fuel economy improvement applies to all configurations and variants of the FMTV. Work Directive planning for the Fuel Economy Block Improvement will begin at the Start of Work meeting, targeting integration of the equipment and software necessary into the exiting vehicle architecture to meet the 30 percent fuel economy requirement in time for delivery of the first vehicle of the fourth program year. The Contractor shall incorporate the necessary modifications into all appropriate technical and logistics documentation to reflect the integration of the new equipment and software.

C.3.11.1 30 Percent Fuel Economy Improvement. As authorized by work directive, the Contractor shall conduct investigation to allow the FMTV to achieve a 30 percent improvement in its fuel economy, with no degradation in automotive performance or RAM (Objective). The FMTV shall employ hybrid or other applicable technology to achieve this result. Load carrying capacity must be maintained and all requirements of the system ATPD 2131C, Attachment 1 are to be met.

C.3.11.2 Logistics Footprint Reduction Analysis. The Contractor will conduct continuous analysis to identify potential opportunities to reduce the existing FMTV Logistics Footprint as authorized by work directives. Goals include, but are not limited to:

- Reduction in the overall number of maintenance tasks required for service, troubleshooting and repair.
- Reduced service, troubleshooting and component replacement times.
- Reduction in the number of FMTV-unique special and fabricated tools.
- Reduction of scheduled services required (in terms of time, number of tasks and parts cost).

C.3.12 Transportability Report. When required by Work Directive, the Contractor shall up date the Transportability Report for new models in accordance with the guidelines provided in AR 70-47 and the Data Item Description DI-PACK-80880 (Contract Data Requirements List A085). The Transportability Report shall include all vehicle models." ***

* Changed by Amendment 0001.

** Changed by Amendment 0002.

*** Changed by Amendment 0003.

**** Changed by Amendment 0004.

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*** END OF NARRATIVE C 001 ***

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SECTION J - LIST OF ATTACHMENTS

<u>List of</u> <u>Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number</u> <u>of Pages</u>	<u>Transmitted By</u>
Exhibit A	CONTRACT DATA REQUIREMENTS LIST	08-OCT-2002		
Attachment 001	FMTV A1 CR ATPD 2131C SYSTEM DESCRIPTION	11-OCT-2002		

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SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

Name of Offeror or Contractor:L.1 Proposal Instructions and Content.

L.1.1 Proposal Submission. The proposal shall be submitted in the formats and quantities set forth below. Section M sets forth evaluation criteria and their relative order of importance to the Government. All proposals shall be in English (American Standard). All proposals shall be in US dollars. In preparing proposals, the Offeror shall cross-reference their response within each section of the proposal to the pertinent evaluation criteria in Section M. Where a proposal would become duplicative of a response already given, it shall reference by paragraph number and not restate the same information within that volume. Each section of the proposal shall be separable to facilitate review by the Government. Offers shall be submitted in the following types and quantities:

Volume Number	Title	Paper Copies	Electronic Copies
1	Executive Summary	12	3
2	Life Cycle Cost Area	6	5
3	Contract Price Area	4	4*
4	Technical/Logistics Area	6	5
5	Past Performance/Small Business Participation Area	3	3
6	Production Capability Area	3	3
7	Proposed Terms and Conditions	4	3

* One electronic copy of Volume 3 shall be provided to the Offeror's cognizant DCAA Office (4 total).

Thirty days prior to the Phase II proposal submission, the Offeror is required to provide a Forward Pricing Rate submission/proposal including the volume of business associated with this solicitation to the cognizant DCMC office.

L.1.2 Proposal Evaluation. The Offeror's proposal/offer as required by this Section shall be evaluated, as set forth in Section M of this Solicitation. The Government may use non-Government consultants to assist in evaluation of proposals submitted under this solicitation. Offerors will be advised in advance of any Government plans to utilize non-Government consultants. If access to any proprietary material from an Offeror's proposal needs to be provided to a non-Government consultant, the Offeror's specific approval to provide such access must be received before access may be provided so as to comply with 18USC1905.

L.1.3 Electronic Offers.

L.1.3.1 Offerors must submit an electronic offer along with their paper copies, and any supplemental information (such as spreadsheets, backup data, and technical information) using the following:

(i) Files using these Microsoft 97 Office Products (TACOM can currently read Office 97 and lower): Word, Excel, PowerPoint or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print image is not acceptable.

ii) Files in Adobe PDF (Portable Document Format). Scanners should be set to 200 dots per inch.

(iii) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to live Internet sites or pages. All linked information must be contained within the electronic offer and be accessible offline.

(iv) Other electronic formats. Before preparing the offer in any other electronic format, the Offeror shall e-mail the buyer identified in Block 10 of the solicitation cover sheet (Government Standard Form 33), with e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the buyer not later than ten calendar days before the closing date. Failure to e-mail the buyer within this timeframe to seek an alternate format's acceptability may result in rejection of the offer. All alternate methods must be at no cost to the Government.

Note: The above formats may be submitted in compressed form using self-extracting files.

L.1.3.2 Acceptable Media. The Offeror must submit the electronic copies of the offer via 650 MEGABYTE CD ROM. Offerors shall label

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any and all submitted disks with the solicitation number and closing date, and the Offeror's name and address and contact phone number. Envelopes containing disks must be labeled per FAR 52.215-1, found within the provision "Instructions to Offerors-Competitive Acquisition", listed in Section L.

L.1.3.3 Lateness. The lateness rules for submitted proposals are outlined in FAR 52.215-1 "Instructions to Offerors-Competitive Acquisition", listed in Section L of this solicitation.

L.1.3.4 Security Note. If the Offeror chooses to password protect access to the offer, the Offeror must provide the Password to TACOM before the closing date. Contact the buyer identified in Block 10 of the SF33 solicitation cover sheet to arrange a means of providing it. Passwords used only for the purpose of write protecting files need not be provided.

L.1.3.5 Electronic Offers must include, as a minimum:

a. The SF33 "Solicitation, Offer and Award" filled out. SIGNATURE: The SF33 must be signed and included electronically in your disk or CD. Clearly label the disc/CD ROM as described in paragraph L.1.3.2 above, adding the name and title of the signer authorizing the Offeror's company, company name, and then sign the LABEL itself.

b. All applicable fill-in provisions from Sections A, B, F and K of this solicitation. The Offeror may find Word versions of Section K provisions requiring the Offeror fill-in on the TACOM Business Opportunities webpage (<http://contracting.tacom.army.mil/mastersol/sectionk.htm>). The Offeror can fill them in and attach them to the offer. See the solicitation for which provisions are required. Also, Section E provisions filled in (if applicable): Inspection Point Origin, TACOM Clause 52.246-4028. All applicable fill-ins must be completed and submitted by the Offeror.

c. A statement of agreement to all the terms, conditions and provisions of this solicitation.

d. Any other information required by the solicitation.

e. A Subcontracting Plan IAW FAR 52.219-9 "Small Business Subcontracting Plan".

L.1.3.6 Please see FAR 15.207(c) for a description of the steps the Government shall take with regard to unreadable offers.

L.1.3.7 Offerors shall make every effort to ensure that their offer is virus-free. Offers (or portions thereof) submitted which DO reflect the presence of a virus, or which are otherwise rendered unreadable by damage in either physical or electronic transit, shall be treated as "unreadable" per paragraph L.1.3.6. above.

L.1.3.8 Electronic Proposal Volumes. Each volume of an electronic copy of the proposal shall be submitted on a separate disk (see "acceptable Media above.") The volumes/disks shall be: 1) Executive Summary, 2) Life Cycle Cost Area, 3) Contract Price, 4) Technical/Logistics Area, 5) Past Performance/Small Business, 6) Production Capability Area and 7) Proposed Terms and Conditions. The proposal text shall be no smaller than 12 point font. Charts supporting the proposal shall use a font size no smaller than 10 point font. Each page shall be numbered and an index shall be provided with each section of each volume with references to page numbers. Each volume shall be separable and able to stand alone for evaluation purposes. For the Contract Price Volume, spreadsheets should be in Excel or Excel readable format.

L.1.3.9 Paper Copies. Paper copies of each separate volume shall be provided, clearly labeled and in a separate binder. The paper copy shall be identical to the electronic proposal submission. Each page shall identify the appropriate volume/folder and be numbered. With the exception of drawings, paper pages shall be on standard 8.5" x 11" paper except for single foldout pages (up to 17" x 11" allowed). An index shall be provided with each section of each volume with reference to page numbers. Separate drawings may be submitted in electronic format. Specific formats and media of supporting data should be checked with the Government prior to submission to insure compatibility. IN THE EVENT OF A DIFFERENCE, THE PAPER VERSION SHALL TAKE PRECEDENCE OVER THE ELECTRONIC VERSION OF THE OFFER.

L.1.3.10 SPECIAL INSTRUCTIONS FOR PROPOSAL DELIVERY: Due to new security regulations, the Offeror is required to schedule a drop off time of their proposal with Ms. Denise Mika or Mr. Jim Victor in order to have the packages go through security for proper screening of the boxes. This time is subject to the Late Proposal Clause in Section L of this solicitation.

L.1.3.11 Any unsolicited proposals will not be considered in this procurement.

L.2 Proposal Volumes

L.2.1 Contractor Proposed Changes (Attachment 18). Volumes 1, 2 and 4 of the proposal (Executive Summary, LCC Area, Technical/Logistics Area) represent the Contractor Proposed Changes.

L.2.2 Volume 1 - Executive Summary (Subpart A of Attachment 18). This volume is subdivided into three sections: 1) Engineering Change Proposal Matrix, 2) System Impact of Proposed Changes, and 3) Engineering Change Proposal Forms. Information included in the

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Executive Summary will be used as applicable in all evaluation areas. The Offeror shall provide a summary of all their proposed changes to the Government FMTV A1 baseline configuration (IAW L.2.2.2.1) that they wish to incorporate in their Contractor's baseline configuration continuing with the same ECP numbering methodology including continuing initial numbers and revision numbers as was done under the Phase I contract. All changes to a Contractor proposed ECP introduced or proposed during Phase I which were not formally incorporated into the previously submitted ECP shall be rolled into the next revision number and submitted with the Phase II proposal. For example, if the Contractor's ECP going into test is at Revision 1 and 2 TWADs were authorized during Phase I testing, these changes will be captured in Revision 2 and submitted with the Phase II proposal. If a Contractor previously withdrew an ECP or decides to withdraw an ECP, it should also be annotated on the list. Any new ECPs resulting from Government directed changes shall be given a new number in sequence with the previously submitted ECPs. Attachment 18, Contractor Proposed Changes, contains an outline for this volume, which is summarized below.

NOTE: To the extent permitted under DFARS 252.227-7013, DFARS 252.227-7014 or DFARS 252.227-7015, the Government shall have unlimited rights to the ECPs submitted in the Contractor's Phase II proposal IAW Clause C.8 of the Phase I contract.

L.2.2.1 Section 1 - Engineering Change Proposal (ECP) Matrix. The Offeror shall supply an ECP matrix, which provides a listing of all the proposed ECPs by unique identification number, the title of the change, and references to the Government FMTV A1 CR Production Configuration (C.1.2.2).

L.2.2.2 Section 2 - System Impact of Proposed Changes. Within this section, the Offeror must address the net system performance differences of their vehicle configuration as compared to the Government FMTV A1 baseline configuration. The discussion should be of a general nature, identifying and describing the sub-system changes and performance. The Offeror shall also supply a written matrix for the system and the major subsystems (example in Attachment 36) to serve as a thumbnail sketch of where the Offeror addresses various changes in the proposal.

L.2.2.2.1 The Contractor may only propose changes as a result of the situations in C.1.2.3. The Offeror shall provide supporting rationale to justify their decision for any of the situations in the referenced paragraph. Attachment 36 contains a list of all of the performance parameters divided into three bands with technical requirements identified as either "met " or "not met". The Contractor is required to address in their proposal all of the "not mets" from the Phase I testing as listed in Attachment 36 (sent under separate cover and marked "Source Selection Sensitive, See FAR 3.104). Also in their proposal, the Contractor is required to address items in Attachment 36 when changes introduced by the Contractor affect an otherwise successfully performed banded requirement. The Offeror is required to submit with the Phase II proposal a preliminary list updated with any deficiencies noted from the TDP dated 1 May 2002. This is to include a final listing of the discrepancies found in the original Government baseline TDP IAW H.4 of the Phase I contract (C.1.2.4). Upon contract award, this list will become Attachment 40.

L.2.2.2.2 The Contractor shall submit supporting documentation and rationale to support their position for any changes as listed above. This includes the withdrawal of Contractor proposed Phase I ECPs.

L.2.2.3 Section 3 - Engineering Change Proposal Forms. This section contains all of the proposed ECPs without supporting documentation. Instructions for completion of the ECP forms are found in Section C.2.2.2 of this solicitation. This section should provide a concise summary of the proposed ECP, but shall be of sufficient quality and substance to fully describe the change and its impacts on part and system level and overall impact on the vehicle to meet the requirements listed in Section C. The description shall also include a general discussion of the rationale, assumptions and design methodology used in preparing the ECP. Block 40i (Life Cycle Costs) of DD Form 1692 is to be left blank for all ECP forms provided in Section 3 of the Offeror's proposal. Also, the dollar amount for each ECP is not applicable for the Phase II proposal submission. (This amount will be included in your overall Contract Price.)

L.3 Volume 2 - Life Cycle Cost (LCC) Area (Subpart B of Attachment 18). This volume provides all of the required supporting documentation for Life Cycle Costs. For this solicitation, the LCC includes the total contract price for base vehicle quantities, all non-option non-hardware CLINs (except for System Technical Support (STS)), and the Operating and Support (O&S) impact of each proposed change to the FMTV A1 baseline configuration (as determined by the Government from Phase I test results). The LCC is the cost incurred during the total life (including the estimated 20-year operating life for each vehicle), from project initiation through termination. For each proposed change to the FMTV A1 baseline, the Offeror shall provide the following information listed below. The Government will use this information in determining appropriate inputs into a life cycle cost model (Attachment 21) for use in proposal evaluation as described in Section M.7.2.4.

a. Configuration change identification number from Block 8d of the ECP (Attachment 6).

b. Spares Crosswalk. For every part contained in an Offerors proposed ECP, the corresponding baseline part shall be identified. For both the proposed change and its corresponding baseline part, a brief description (nomenclature), the quantity and unit of measure per vehicle by model, the part number, and the National Stock Number (if available) shall be provided. The proposed change part number should be the same one used in the list of proposed spares prices required by L.4.3.5 for the Offerors Unique Spare Parts Pricing (if applicable). If a part in a proposed ECP does not have a corresponding part in the baseline configuration, that fact shall be clearly shown in the crosswalk. Conversely, if a proposed ECP eliminates a part from the baseline configuration with no corresponding replacement part, that fact shall be clearly presented in the crosswalk. If a part applies to only the with winch version or to only the without winch version of a vehicle model, that fact shall be unambiguously displayed in the crosswalk. If an Offeror submits a revised Phase II ECP, it should be clearly noted in the crosswalk which parts of the ECP have been added, deleted, or

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modified.

c. Overlapping Parts List. To help avoid double counting, the Offeror shall identify any overlap of parts among the ECPs. The Offeror shall identify any cases that exhibit the same instance of a particular part, i.e. where two or more ECPs involve a single occurrence of a particular part. The list of overlapping parts shall include the part number, the nomenclature, and the ECPs for which there is a common instance of the part. The list should not include parts or any additional ECPs in which the same part number occurs but which represent separate physical occurrences of the hardware item.

L.4 Volume 3- Contract Price Area. The Contract Price volume includes the cost/price for all items, including priced options.

L.4.1 The Contract Price volume shall include data to support the realism and reasonableness of the proposed amounts. The evaluation of realism and reasonableness seeks to determine whether the proposed amounts accurately reflect the estimated price for the Offeror's specific technical approach. The most important aspects of the contract price proposal shall include the following:

a. The proposed price to the Government must reflect the use of prudent judgement and sound business practice. Sound business practice includes compliance with governing regulations about estimating and accounting for costs.

b. The Contract Price Volume must also be consistent with the Offeror's Life Cycle Cost (LCC) and Technical/Logistics Volumes. The consistency between the Offeror's LCC, Contract Price and Technical/Logistics volumes reflects on the Offeror's understanding of the work required and on the Offeror's ability to perform the effort required by the scope of work for the amount proposed. Any significant inconsistency, if unexplained, raises a fundamental question as to the Offeror's inherent understanding of the work required and as to their ability to perform the contract.

L.4.2 Proposal Structure. The instructions that follow are not intended to be all-inclusive. Offerors may submit any other price and financial information they consider to be helpful in the evaluation of the price proposal. The Government will use many resources in the evaluation of the price proposal. The Government reserves the right to request more detailed information. In addition to the spreadsheets requested below, the Offeror shall fill in the Government provided Excel summary spreadsheets found in Attachments 37 and 38. The filled in Excel spreadsheets shall contain all of the Offerors prices, including options. Prices and quantities that are specified in Section B must match the summary spreadsheets.

L.4.2.1 Printed Submission. The Offeror's name, solicitation number, and date of the submission shall appear on each page of each table in the Contract Price Volume. If a table requires more than one page, each page of the table shall include the column and row titles. All prices shall be stated in U.S. dollars only, including costs for the prime contractor and any potential subcontractors. If the basis for the proposal is any other currency, the Offeror shall state the exchange rate being used to convert this currency to U.S. dollars.

L.4.2.2 Electronic Submission. As described in Section L.1.3.1 all spreadsheets must be in Microsoft Excel 97 format and include all formulae, macro and format information. Print image is not acceptable. In addition, should any Government provided spreadsheet(s) be included in this solicitation, do not alter the structure of such spreadsheet(s) other than to fill in the required data (except as later directed by the Government).

L.4.2.3 Contingencies/Adjustments. The Offeror shall identify the nature and amount of any contingencies or any upward/downward adjustments and the rationale for the adjustment.

L.4.3. Production Contract Items

L.4.3.1 FFP Multi-year Production Quantity. (Attachment 37) The Offeror shall submit one level unit price for Program Year (PY) 1 through PY5 for all basic quantities of vehicle production (a separate price for each model). Provide a spreadsheet for each FMTV model, (or CLIN item) showing the level unit price extended by total multiyear quantity for the categories as described in L.4.5.1 Direct Labor through L.4.5.10 Nonrecurring Cost below. For models that include the requirement of with and without a winch, a separate spreadsheet showing the same detail for the additional winch cost for each model will suffice. The cancellation ceiling clause at H. 13 applies and must be filled in by the Offeror.

L.4.3.1.1 FFP Options. (Attachment 38, H.9.) Option quantities/items do not need to be level priced across program years. For FFP options that are not level priced, provide a separate spreadsheet for each vehicle/option by PY for the categories as described in L.4.5.1 Direct Labor through L.4.5.9 Warranty below. For level priced FFP options, provide one separate spreadsheet for each vehicle/option.

L.4.3.2 FFP Program Support (reference C.2 along with Attachment 37). Provide a separate spreadsheet for each of the following Program Support categories: Pre-Production (see L.4.4.1); Production Effort (see L.4.4.2); and Program Management (see L.4.4.3) for each PY. Include items in L.4.5.1 Direct Labor through L.4.5. 7 Profit below in the spreadsheet along with the basis of estimates for all direct costs. In addition, provide the dollar amount proposed for each item in L.4.4.2 a. through g. and the basis of estimate for each item by model and PY.

L.4.3.3 Ceiling Price Option Efforts. (reference H.9.1.6, Attachment 38) Provide a spreadsheet for each FMTV model showing the

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proposed ceiling unit price extended by Government provided estimated option quantities for the categories as described in L.4.6.1 through L.4.6.10 below. If these items are not level priced, provide a spreadsheet for each PY. Provide a separate narrative describing the basis of estimate for all direct costs.

L.4.3.4 Cost Reimbursement, System Technical Support (STS) and Option Hours/Mandays. For the STS Attachment 37, review Section C.3 and H.9.6 of the solicitation and develop composite hourly and manday rates for each separate Program Year. For evaluation purposes, the Offeror may compute a composite hourly rate based on 30% logistics, 30% engineering, 20% quality and 20% configuration management. Provide spreadsheets for each PY including the items described in L.4.7 spreadsheet requirements. If the Offeror proposes a different labor mix, provide rationale for Government review. Upon contract award, the Government will issue work directives based on the estimated composite hourly rate.

L.4.3.5 Unique Spare Parts Pricing. For those parts from the Contractor Proposed ECPs that are not contained in the DOD supply system, the Offeror shall provide a list of part numbers, item nomenclature, proposed prices and delivery lead time. Prices shall be based upon for one base year and 2 option years. For each part, the Offeror shall provide three unit prices: one for the base year and one for each option year. Each price is to be based on the Offerors estimate of the quantity of spares required to support a fleet of FMTV trucks and trailers for one year. Assume a fleet size of 250 trucks and 50 trailers for the base year, 1,500 trucks/700 trailers for the first option year, and 3,500 trucks/2000 trailers for the second option year. For each year, assume that the trucks are equally divided between LMTVs and MTVs and that the trailers are 75% LMTVs and 25% MTVs. The Offeror shall provide the annual spare part quantity used in developing each price. The prices should reflect a projected ordering period of FY05 for the base year, FY06 for the first option year and FY07 for the second option year. The part number and item nomenclature should match those provided in the Spares Crosswalk required in L.3.b. (Life Cycle Cost Area). Disclose how the prices were developed. The Offeror agrees to sell the identified parts at the proposed prices to any Government agency in accordance with special clause H.19.

L.4.4 Program Support Categories

L.4.4.1 Pre-Production

- Pre-production Engineering Proposals (PPEPs)
- Test ECPS

L.4.4.2 Production Effort

- ECP/RFW/RFD/VECP Requirements - (Contractor generated)- No cost if implementation does not exceed \$10,000

- Value Engineering

- Government Testing Requirements

- a. First Production Vehicle Inspection (FPVI)
- b. Production Verification Testing (PVT)
- c. Component First Article Tests (CFAT)
- d. System Support Package (SSP)
- e. New Equipment Training
- f. PVT Training
- g. I&KPT

- Vehicle Tracking Report

- The Army Maintenance Management System (TAMMS) Equipment Control Records

- Integrated Logistics Support (ILS) Management in Support of Contractor Generated ECPs, to include: Logistics Management Information (LMI), Provisioning, Publications Revision, Vehicle Refurbishment, Army Oil Analysis Program (AOAP) Report Update, Logistic Demonstration, System Support Package

- Training Instructor and Key Personnel (I&KP) Training

L.4.4.3 Program Management

- Meeting/IPT Requirements - agendas, minutes
- CDRLs and Data Item Descriptions (DIDs)
- Cost Related Reports
 - a. Contractor Cost Data Reporting Requirements (CCDR)
 - b. Cost Reports for Cost Reimbursable CLINs
- Configuration Management Plan
- Life Cycle Management Initiatives
- Maintainability Initiative

L.4.5 For FFP Multi-year Production Quantity (L.4.3.1), FFP Options (L.4.3.1.1), and FFP Program Support (L.4.3.2) spreadsheets include:

L.4.5.1 Direct Labor. Total direct labor hours and dollar value, by unit and cost extended to total quantity.

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L.4.5.2 Direct Material. Total direct material by unit and extended price. Provide a link to a separate bill of material spreadsheet for items >\$500 per vehicle (or non-vehicle option). Include description, vendor name, part number, quantity and unit of measure (per vehicle), price per item and extended per vehicle, basis of price (quote, purchase order, estimate, etc.)

L.4.5.3 Other Direct Costs (ODCs). Provide total ODCs by unit and extended cost .

L.4.5.4 Major Subcontractor (>\$5,000,000 by model excluding options). Provide same data as for the Prime Offeror (excludes commercial or competitive items).

L.4.5.5 Interdivisional Transfers. Provide same data as for the Prime Offeror (excludes commercial or competitive transfers).

L.4.5.6 Indirect Costs. Total indirect costs per unit and extended cost (including: labor overhead, material overhead, and G&A amount(s)).

L.4.5.7 Profit. Per unit and extended.

L.4.5.8 Federal Retail Excise Tax (FRET) If applicable, per unit and extended._

L.4.5.9 Warranty. If applicable, per unit and extended._

- (1) Hand-off Warranty
- (2) Material & Workmanship Warranty
- (3) Pass-Through Warranties
- (4) Systemic Defect Warranty
- (5) Technical Data Warranty

L.4.5.10 Nonrecurring cost included in L.4.3.1 (Multiyear Production Quantity). The Offeror shall provide a spreadsheet showing the total nonrecurring cost (by categories listed in L.4.5, exclusive of G&A and profit) included in the production vehicle prices and show the amount incurred in each program year. Show how the total nonrecurring costs are included in the individual proposed unit prices. Nonrecurring costs include such costs, where applicable, as plant and equipment relocation or rearrangement, special tooling and special test equipment, preproduction engineering, initial rework, initial spoilage, pilot runs, allocable portions of the costs of facilities to be acquired or established for the conduct of the work, costs incurred for the assembly, training, and transportation to and from the job site of a specialized work force, and unrealized labor learning. Provide the differences of nonrecurring costs versus Offeror proposed by PY cancellation ceiling amounts. Provide rationale for the differences.

L.4.5.10.1 Costs associated with Embedded Diagnostics (C.1.7).

L.4.6 For Ceiling Price Option Effort (L.4.3.3) spreadsheets include:

L.4.6.1 Direct Labor. Direct labor hours and dollar value, by skill level or department, and by unit and cost extended to total quantity.

L.4.6.2 Direct and Indirect Rates reflecting the impact of this proposal

L.4.6.3 Direct Material. Total direct material by unit and extended price. Provide a link to a separate bill of material spreadsheet for items >\$500 per vehicle/unit. Include description, vendor name, part number, quantity and unit of measure (per vehicle), price per item and extended per vehicle, basis of price (quote, purchase order, estimate, etc.)

L.4.6.4 Other Direct Costs (ODCs). Provide total ODCs by unit and extended cost, by major ODC category.

L.4.6.5 Major Subcontractor (>\$500,000) Provide same data as for the Prime Offeror (excludes commercial or competitive items). The \$500,000 covers the total Ceiling Priced effort.

L.4.6.6 Interdivisional Transfers. Provide same data as for the Prime Offeror (excludes commercial or competitive transfers).

L.4.6.7 Indirect Costs. Show application of indirect rates in spreadsheet per unit and extended cost (for example: labor overhead, material overhead, and G&A amount(s)).

L.4.6.8 Profit. Per unit and extended.

L.4.6.9 Federal Retail Excise Tax (FRET). If applicable, per unit and extended.

L.4.6.1 Warranty. If applicable, per unit and extended.

- (1) Hand-off Warranty

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- (2) Material & Workmanship Warranty
- (3) Pass-Through Warranties
- (4) Systemic Defect Warranty
- (5) Technical Data Warranty

L.4.7 For Cost Reimbursement Systems Technical Support (L.4.3.4) 3 separate spreadsheets include:

L.4.7.1 Direct Labor.

L.4.7.1.1 System Technical Support Regular Hours (C.3): Show the composite rate based on the Government provided hours and total dollar amount. Also, provide the calculations showing how the composite rates were computed (show calculation and rates used), including description of the labor skill/departments used.

L.4.7.1.2 System Technical Support Maintenance Technical Representatives (MTR) CONUS (C.3.6): Provide calculations showing how the manday rate was computed. For evaluation purposes, the locations and quantities of the MTR personnel are: 1 Ft. Drum, NY; 1 Ft. Lewis, WA; 2 Ft. Bragg, NC; 2 Ft. Stewart, GA; 1 Ft. Leonard Wood, MO; 2 Ft. Campbell, KY; 1 Ft. Huachuca, AZ; 1 Ft. Carson, CO; 3 Ft. Hood, TX.

L.4.7.1.3 System Technical Support Maintenance Technical Representatives OCONUS (C.3.6): Provide calculations showing how the manday rate was computed. For evaluation purposes, the locations of the MTRs are: 3 in Korea (Tong Du Chon, Pusan, Osan), 1 in Alaska (Ft. Richardson) and 1 in Hawaii (Schofield Barracks).

L.4.7.2 Other Direct Costs (ODCs)/Other Factors. Provide all ODCs and other factors which are automatically calculated, based on the labor categories in your composite rate, as part of your disclosed and/or normal accounting practices.

L.4.7.3 Indirect Costs. Show application of all indirect rates normally applied. Also show the source of the rates which reflect impact of contract award.

L.4.7.4 FCCM. Show application of Facilities Capital Cost of Money rates.

L.4.7.5 Fee. Show fee per direct labor hour.

L.5 Volume 4 - Technical/Logistics Area (Subpart C of Attachment 18). This volume shall be broken into two sub-volumes: 1) Technical System Performance and 2) Logistics.

L.5.1 Element 1: Technical System Performance: In this sub-volume, the Offeror shall submit all pertinent supporting information and data to the proposed ECPs necessary for the risk assessment of the Offeror's demonstrated and/or projected system performance with the requirements of Section C and identified in the vehicle system specification, ATPD 2131C, Attachment 1. Each ECP shall be submitted on a separate disk. Six (6) copies of ECP disks shall be submitted (one copy for each paper copy of Volume 4). For test fixes and Government directed changes that were not tested, the Offeror's technical information shall be used to assess the suitability and technical risk of the Offeror's proposal to meet the requirements of the solicitation. Overall, the Offeror's discussions should demonstrate a comprehensive understanding of truck design methods and concerns that will ensure performance specification compliance. The evaluation criteria used in assessing the Offeror's system performance are defined in Section M.7.2.6. Each band, as identified IAW the ATPD 2131C Requirements Matrix, Attachment 36, was assigned to a relative order of importance element IAW with Section M.7.2.6.

(1) Factor 1 - Band 1

(2) Factor 2 - Band 2

(3) Factor 3 - Band 3

L.5.2 Supporting Data. This section contains all of the Offeror's proposed ECPs IAW C.2.2 with supporting documentation. The Offeror shall fill out the Engineering Change Proposal (ECP) forms (DD Form 1692, Attachment 6) or equivalent Offeror's format for all the proposed changes. If Offeror format is used, it should provide all the information for the changes, with the same block numbers and nomenclature. Instructions for filling out the form are given in Attachment 6. As supporting documentation to the ECP form, the Offeror shall include a Notice of Revision (NOR) form (DD Form 1695, Attachment 6) for each revision covered under the ECP, the revised or new drawings associated with the NOR ("Redlined" revisions to drawings are acceptable.) and 3-D solid models of the proposed ECP. The 3-D solid models shall be in Pro/ENGINEERING (PRO/E) version 2001 format and prepared IAW C.2.1.1.1.4. Other supporting documentation that may be provided at the Offeror's discretion includes:

- a. Sketches
- b. Questionnaires
- c. Technical trade studies
- d. Computer animation (coordinate with the Government on specific formats if different from the modeling and simulation requirements)

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- e. Engineering analysis
- f. Government or commercial test data/certifications
- g. Offeror modeling and simulation results
- h. RAM-D analysis and predictions
- i. Draft Item Performance Specifications (IPS)
- j. Draft Interface Control Documents (ICDs)
- k. Applicable commercial/industry/recognized societies' standards
- l. Specifications
- m. Specification sheets
- n. Commercial literature
- o. Sales brochures
- p. Vehicle/assembly/component characteristics sheets
- q. Compatibility studies with the FMTV A1 fleet
- r. Producibility of all the Offeror parts/changed parts, and system/s
- s. Common Fleet Integration Design Practices including but not limited to:
 - 1) Future upgrades, improvements, and other commercially competitive products that could potentially be inserted into the configuration based on the Offeror's common fleet integration design practices
 - 2) Common commercial standards utilized for the hardware/design
 - 3) Tooling, proprietary process, and proprietary data necessary for producing the item
 - 4) Potential competitive sources for the item
 - 5) Potential access and availability of the item to alternate vendors
 - 6) Types of adapter/interface kits that may be required to adapt alternate hardware to the configuration
 - 7) Potential modification procedures, equipment and facilities necessary to install the Offeror's hardware onto FMTV A1 vehicle
 - 8) Potential future growth opportunities for the hardware/design and ease of retrofit into the Offeror's architecture

t. Analysis of other test criteria that the Government may examine during test so that the Government can fully examine the Offeror's design beyond the testing and modeling/simulation currently described in Section C.

L.5.3 Modeling and Simulation. Modeling and Simulation will be used to both assist the Offeror in preparing a proposal and support the Government's evaluation of the Offeror's proposed ECPs.

L.5.3.1 Modeling and Simulation Input Requirements. The Offeror is required to provide with their proposal, solid models of their design changes for all variants IAW Section L.5.2 of this RFP. In addition, 2-D drawings for all changes to all variants are required to be submitted with the proposal. The items required to support this analysis and the format for the Offerors input are described in Attachments 24 through 34, and shall be submitted with the proposals, whether changes to the initial Phase I ECP have been made or not, for evaluation. All changes shall be highlighted. Solid models and 2-D drawings shall be prepared IAW C.2.1.1.1.4, except that it is acceptable, for their proposal only, for the Offeror to provide solid models in their native solid modeling format. If Offeror uses software other than PRO/E, the Government shall be provided with one license to use the native solid modeling software on a Silicon Graphics Incorporated (SGI) workstation running IRIX-6.5. The license should allow the Government to load and run the software 30 days prior to proposal submission and should run a minimum of 30 DAC, whether they are the successful Offeror or not. In addition, all other modeling and simulation data of the proposed M1078A1 with winch, M1083A1 with winch, M1088A1 with winch, and M1089A1 with winch shall be submitted as part of Volume 4, for evaluation of FMTV A1 requirements listed in the ATPD 2131C, Attachment 1.

L.5.3.2 Optional Modeling and Simulation Development. After RFP release, and prior to proposal submission, the Government will allow the Offerors:

- 1) Up to 3 DADS and NRMM simulation results on Government Computing Resources for the M1078A1 at Gross Vehicle Weight (GVW) and/or Gross Combined Weight (GCW) as defined in the vehicle specification.
- 2) Up to 3 DADS and NRMM simulation results on Government Computing Resources for the M1083A1 at GVW and/or GCW.
- 3) Up to 3 DADS simulation results on Government Computing Resources for the M1088A1 while towing a payloaded and/or non-payloaded M871A2 flatbed trailer.

The Government will provide comparisons of model output versus the performance requirements for trend analysis. The pre-proposal simulation support will consist of the interested bidding contractors submitting their vehicle data sheets (DADS using Attachment 26, NRMM using Attachment 27) to the Government prior to proposal submission. The Government will develop the models with this data. The Government will perform a simulation, similar to that used during the Government's proposal evaluation, and provide the output to the Offeror. This effort will benefit the Government by allowing receipt of the model data ahead of the proposal submission and providing

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the best use of Government proposal evaluation time to perform analysis and evaluation of the Offerors' configurations against the requirements. The benefit to the Offerors is that they could, using the output of the Government simulations, modify their designs to better meet the system requirements, potentially resulting in the Government acquiring better trucks. In order to take advantage of this Government offering, an Offeror must:

- a. Enter into a Computer Resource Partnering Agreement with the Government similar to that described in Attachment.24.
- b. Provide the data outlined in Attachment 33 for the DADS and Attachment 32 for the NRMM simulation.

L.5.3.3 Modeling Data Security. The Government will establish partitions between competing Offeror models and data in order to prevent unauthorized dissemination or exchange of any competition sensitive, source-selection, or proprietary information, or for the premature or unilateral release of acquisition-related information. The Government acknowledges that the data provided by the Offerors and the modeling and simulation data results are "Competition Sensitive - Business Confidential" and therefore exempt from the release under the Freedom of Information Act (FOIA).

L.5.4 Hazardous Materials. The Contractor shall review their proposed changes and notify the Government in their proposal of any Hazardous Materials used in the performance of this contract. The Contractor's written notification shall identify the part/drawing affected, the prohibited substance and shall recommend alternative environmentally-friendly materials, and shall furnish engineering documentation to substantiate any performance variation between the item made of the prohibited material and the item made of the alternative material. Hazardous Materials notification includes but does not limit itself to cadmium, hexavalent chromium, Class I or Class II ozone-depleting chemicals (ODCs) or other highly toxic or carcinogenic materials in the manufacture or assembly. ****

L.5.5. Element 2 - Logistics - This sub-volume shall consist of the Offeror's plan for meeting the Phase II Logistics requirements, including option requirements, as outlined below. The plan will include management, organization, staffing, procedures, and scheduling.

- a. ILS Management Support , IAW paragraph C.2.7
- b. Publications Requirements, IAW paragraph C.2.9
- c. Training Requirements, IAW paragraph C.2.10
- d. STS ILS support for the Expansible Van and Government generated ECPs if required by the time of FMTV A1 CR FUE, as well as FMTV A0, FMTV A1, FMTV A1 CR and Special Purpose Kits Logistics Package updates whenever required, IAW paragraph C.3.4., and Publications updates, IAW paragraph C.3.5. **
- e. Maintenance Technical Representative Support, IAW paragraph C.3.6.
- f. Embedded Diagnostics, IAW paragraph C.1.7.
- g. Maintainability Initiative, IAW paragraph C.2.13
- h. Field Issue Resolution, IAW C.3.10
- i. The following warranties: Hand Off, Material and Workmanship, Pass-Through, Systemic Defect, and Logistic Data, IAW paragraph H.5.2.
- j. Reduced Logistics Footprint, C.3.11, 30 Percent Fuel Economy Improvement, C.3.11.1 and Logistics Footprint Reduction Analysis, C.3.11.2. *
*

L.6 Volume 5 - Past Performance/Small Business Participation Area. This volume shall be broken into two sub-volumes: 1) Past Performance and 2) Small Business Participation. The specific input required is described below.

L.6.1 Element 1 - Past Performance. Within this sub-volume, the Offeror shall provide information for the Offeror's recent and relevant contracts. NOTE: Offerors are requested to submit Past Performance information required below 30 days prior to the RFP closing date. The basic information submitted may be supplemented up until the closing date of the RFP or any extension of that date. While compliance with this request is not mandatory, it will help the Government expedite the evaluation process once offers have been received. If the Offeror plans to submit an offer but cannot comply with this request, please notify Ms. Denise Mika by e-mail at mikad@tacom.army.mil.

a) Provide information for your recent, relevant contracts, and those of your proposed major or critical subcontractors, including Federal, State and local government and private industry contracts. Recent contracts are those with any performance taking place approximately within three (3) years previous to the date of solicitation issuance. Relevant contracts are those which are similar in scope to the requirements of this solicitation. Commercial contracts may be included. Each past contract does not have to meet all of the requirements below to be considered relevant, but we are especially interested in the following information on contracts you submit in accordance with this Area:

Production of Light, Medium and Heavy Tactical Trucks along with Logistic Support, Configuration Management and System Technical Support for these trucks.

b) Provide the following for each prior Contract (both prime and "significant" subcontractors-"significant" subcontractors are subs, exclusive of raw material or component suppliers, whose total work contribution exceeds 10% of the total proposed price). For each prime or subcontractor contract identified by the Offeror as being recent/relevant to the instant effort, provide the following:

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- (1) Identify in specific detail why or how you consider the historical contract effort to be relevant or similar to the approach you propose to meet the requirements of this solicitation. Provide a description of the scope of work requirements and a discussion of similarities between the contract scope you are reporting and the scope of this solicitation.
- (2) Identify your (and any partners or significant subcontractors) CAGE and DUNS number.
- (3) Government or commercial contracting activity technical representative, address, telephone number, fax number and E-mail address.
- (4) If a U.S. Government contract, Procuring Contracting Officer and Administrative Contracting Officer name, address, telephone number, fax number and E-mail address. If not a U.S. Government contract, the equivalent information for foreign Government or commercial contracts.
- (5) Contract Number.
- (6) Contract Type.
- (7) Award Price.
- (8) Production Quantities and rate of production.
- (9) Overall dates of contract performance.
- (10) Identification of Customer.
- (11) Final, or projected final, Price.
- (12) Original contract delivery schedule requirements.
- (13) Final, or projected final requirements.
- (14) For any proposed contracts that did not or do not meet the original contract requirements with regard to cost, schedule or technical performance, provide a detailed explanation of the reasons for such shortcomings and any demonstrated corrective actions taken to fix the problem and avoid reoccurrence.
- (15) Provide a brief narrative explanation that describes the objectives achieved to date on each contract. If it is a U.S. Government contract, the Offeror shall also provide a copy of any Cure Notices or Show Cause Letters received on each contract listed and a description of any corrective action taken by the Offeror or partner or significant subcontractor.

L.6.1.1 Cancellations or Terminations. Identify any recent contracts (in the last 3 years) which have been terminated or cancelled for any reason, in whole or in part, to include those currently in the process of termination and those not similar to the proposed effort. Include prime contracts, contracts under which you were a subcontractor and any of your major subcontractors' contracts. Provide the information requested above for any of these contracts. If there were no terminations or cancellations, please state that. The Contractor shall list each time the delivery schedule was revised and provide an explanation of why the revision was necessary.

L.6.1.2 Corporate Entities. If any contract was performed by a corporate entity or division other than the corporate entity or division that would perform the work under this solicitation, please identify them and indicate to what extent those entities will perform work under this effort. If they have relocated or changed ownership since performance of the listed efforts, please describe any changes in terms of personnel, facilities or equipment, from those expected to perform this effort.

L.6.1.3 Key Personnel. If you have limited or no recent or relevant past performance, but have key personnel who will be playing a significant role in this contract performance and who have had significant and similar responsibilities in conjunction with recent, relevant contracts or subcontracts with a previous employer, we may consider this experience in our evaluation of performance risk. In order for us to consider such experience, please identify these key personnel, their roles and responsibilities for their previous employer and their roles and responsibilities as planned for the current solicitation requirement. Also provide similar information to that identified in (L.6.1 (a) (1)-(15)) above, for the recent, relevant contracts of the predecessor company.

L.6.1.4 Predecessor Company. Likewise, if you or a significant subcontractor only have relevant and recent performance history as

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part of a predecessor company, we may consider that past performance in our evaluation of performance risk. Please provide the information identified in (L.6.1 (a)(1)-(15)) above and the Paragraphs addressing "Cancellations or Terminations" and "Corporate Entities", for those recent, relevant contracts of that predecessor company.

We may use data you provide and data we gather independently from other sources to evaluate past performance. Since we may not interview all the sources you provide, it is incumbent upon you to explain all the data you provide. We do not assume the duty to search for data to cure problems we find in proposals. The burden of providing thorough and complete past performance information remains with the Offerors. We may assign a higher risk rating to your proposal, or reject your proposal if it does not contain the information requested.

L.6.2 Element 2 - Small Business Participation. All Offerors are to identify the extent to which U.S. small business concerns would be utilized as first tier subcontractors in the performance of the proposed contract. U.S. small business concerns are defined (1) in FAR 19.001 and (2) by the criteria and size standards in FAR 19.102 for the applicable North American Industry Classification System code. U.S. Small Business concerns include small businesses (SBs), small disadvantaged businesses (SDBs), HUBZone small businesses (HUBZone SBs), woman-owned small businesses (WOSBs), veteran-owned/service-disabled veteran-owned small businesses (VOSBs) and historically black colleges/universities and minority institutions (HBCU/MIs).

Small business concern participation, for the base year as well as for each program year or option, shall be identified in a table format substantially as follows:

BASE YEAR

BUSINESS CATEGORY	Dollar Amount (all SubKs)*	Percentage of SB Participation
Total Subcontracting (LB+SB)	\$43M	100%
SB	\$10M	23.25% (\$10M of \$43M)
SDB	\$2.15M	5.00% (\$2.15M of \$43M)
WOSB	\$2.36M	5.50% (\$2.36M of \$43M)
VOSB	\$0.3M	0.69% (\$0.3M of \$43M)
HUBZone SB	\$1.0M	2.32% (\$1.0M of \$43M)
HBCU/MI	\$0.15M	\$0.15M

*Includes 1st tier subcontractors only; Interdivisional transfers are considered subcontracts; includes prime Offeror participation if the prime is a U.S. small business concern.

L.6.2.1. All Offerors are to provide (individually for each base year and for each program year or option) the names of small business concerns who would participate in the proposed contract; the small business classification of each small business concern (i.e. SB, SDB, WOSB, VOSB, HUBZone SB, and/or HBCU/MI); a short description of the specific components to be produced or services to be provided by each small business concern; and the estimated total dollars for each product or service. This data shall be provided in a table format substantially as follows:

Base Year

Name of Small Business Concern	Small Business Classification(s)	Description of Product/Service	Total Dollars
ABC Co.	SB	Wire	\$0.50M
ABC Co.	SB	Plating	\$0.75M
EFG Inc. (Prime Offeror)	SB, WOSB, VOSB	Circuit Cards	\$1.20M

L.6.2.2 Offerors shall also provide a description of their performance in complying with the requirements of FAR 52.219-9, including documentation of their accomplishment of the goals established under Subcontracting Plans of prior contracts. This data shall include contracts performed over the last three (3) calendar years. Firms which have never held a contract incorporating FAR 52.219-9 shall so state.

L.7 Volume 6 - Production Capability Area. This volume shall describe the various production methods and systems that the Offeror intends to apply in the performance of the Family of Medium Tactical Vehicles production contract which address the requirements contained in C.1.2.5 of the RFP.

L.7.1 Manufacturing Plan. The Offeror shall provide a detailed production facility layout drawing that identifies the progressive physical flow of hardware within the Offeror's proposed production site. The layout shall detail the flow process from the point of material receipt and storage, through component assembly, causeway assembly, paint, test, prep and ship. The layout shall also detail the critical path for producing the Family of Medium Tactical Vehicles. The Offeror shall also describe any in-house manufacturing that is planned to support the Family of Medium Tactical Vehicles production. The Offeror's layout shall identify the location of all required production equipment and ancillary support equipment (forklifts, cranes, etc.) which are required to support the proposed production approach. If a Manufacturing Requirements Planning (MRP) or Manufacturing Resource Planning (MRP II) system or software

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program will be used during production, the Offeror shall provide a detailed description of how it operates, its expected effect(s) on production, and how the use of that system or software program will ensure timely delivery in accordance with the master schedule for the Family of Medium Tactical Vehicles. Additionally, the Offeror shall provide production capacity data for the proposed production site. This capacity data needs to address all other production programs that are planned or anticipated (Government and commercial) for the full 5 years that the FMTV will be in production. The Offerors should identify any FMTV models that have production capacity constraints, what the constraints are and what the maximum quantity per month/year that could be produced.

L.7.2 Facilities. The Offeror shall describe the facility/facilities proposed for use in the Family of Medium Tactical Vehicles production phase. The Offeror shall provide the dimensional size (sq. ft.) of all structures, storage areas, lots, test facilities and open areas at the site. The Offeror shall identify all public utilities required and currently available at each location and the proximity of the site to highway, rail or seaway capabilities. The Offeror shall provide a milestone schedule for any new facility construction and identify the size and capacity for the new facility.

L.7.3 Equipment. The Offeror shall identify and milestone the availability of all key equipment items required to accomplish production. The Offeror shall categorize the equipment in accordance with proposed use, identify the source for the equipment and the proposed availability dates.

L.7.4 Time Phase Critical Path. The Offeror shall provide a Time Phase Critical Path schedule that identifies the start date and end date for each major task required to meet the contract delivery schedule, from program go-ahead through Government acceptance of vehicles. As a minimum, this should include the schedule for any open design actions, facility projects, tooling purchase and installation, components subcontracts award, procurement lead time, fabrication, assembly and inspection.

L.7.5 Configuration Management Plan (CMP). The Offeror shall provide a copy of their Configuration Management Plan. The Offerors CMP shall:

- a. Detail their CM policies, procedures, and capabilities for managing a production baseline
- b. Identify how the Offeror will manage technical documentation for the production baseline with regards to configuration identification, configuration control, configuration status accounting, configuration audits and data management
- c. Detail their CM requirements for production part tracking, support of fielded configuration, management of changes resulting from logistical or support activities
- d. Identify those CM policies/requirements that are enforced to its vendor base
- e. Detail the electronic environment that the Offeror shall use for maintaining and updating the Government TDP, configuration status accounting, change control, and parts management

L.8 Volume 7 - Proposed Terms and Conditions

L.8.1 The Offeror shall provide signed SF 33 "Solicitation, Offer and Award".

L.8.2 All applicable fill-in provisions from Sections A, B, F and K of this solicitation. Also, Section E provisions filled in (if applicable): Inspection Point Origin, TACOM Clause 52.246-4028.

L.8.3 The Offeror shall include a completed Section B with this volume and Attachment 38 for option pricing.

L.8.4 The Offeror shall submit proposed milestones and criteria for Performance Based Payments.

L.8.5 The Offeror shall submit a Subcontracting Plan IAW the Contract Clause entitled "Small Business Subcontracting Plan FAR 52.219-9 (Oct, 1999)".

L.8.6 Any other information required by the solicitation.

L.8.7 A statement of agreement to all the terms, conditions and provisions of this solicitation.

L.8.8 Identify any RFP terms, conditions or requirements which the Offeror takes exception to.

L.9 Partnering

In an effort to most effectively accomplish the objectives of this contract, it is proposed that the Government and the Contractor engage in the Partnering process.

Participation in the Partnering process is entirely voluntary and is based upon a mutual commitment between government and industry to work cooperatively as a team to identify and resolve problems and facilitate contract performance. The primary objective of the process is providing the American warfighter with the highest quality supplies/services on time and at a reasonable price. Partnering requires the parties to look beyond the strict bounds of the contract in order to formulate actions that promote their common goals and objectives. It is a relationship that is based upon open and continuous communication, mutual trust and respect, and the replacement of the "us vs. them" mentality of the past with a "win-win" philosophy for the future. Partnering also promotes synergy, creative

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thinking, pride in performance, and the creation of a shared vision for success.

After contract award, the Government and the successful Offeror will decide whether or not to engage in the Partnering process. Accordingly, Offerors shall not include any anticipated costs associated with the implementation of the Partnering process in their cost/price (e.g. cost of hiring an independent facilitator and conducting the Partnering Workshop). If the parties elect to partner, any costs associated with that process shall be identified and agreed to after contract award.

The establishment of this Partnering arrangement does not affect the legal responsibilities or relationship of the parties and cannot be used to alter, supplement or deviate from the terms of the contract. Any changes to the contract must be executed in writing by the Contracting Officer.

Implementation of this Partnering relationship will be based upon the AMC Model Partnering for Success Process, as well as the principles and procedures set forth in the AMC Partnering Guide (available electronically at http://www.amc.army.mil/amc/command_counsel/partnering.html). The principal government representative for this effort will be Denise Mika.

L.10 Oral Presentation: *

L.10.1 Each offeror that submits a proposal shall have up to 4 hours inclusive a 2 -15 minute breaks to present an overall presentation of their proposal to take place within 21 November and 26 November 2002. This is an informational/orientation briefing to familiarize the Government personnel with the offeror's proposal. The presentation shall be structured to follow along with the RFP structure. The offeror will not be allowed to change his proposal for this presentation. A Contractor may clarify aspects of its proposal or resolve minor or clerical errors (this will not be deemed discussions). *

L.10.2 The Government will provide a standard overhead for viewgraphs as well as a VCR for VHS tape if necessary. Any equipment required for an offeror's presentation beyond this will be the responsibility of the offeror to provide. After an offeror submits his request for the date of the oral presentation, the Contracting Officer will notify the Contractor if the date is acceptable and to the exact location and time of the presentation. Upon the foregoing presentation, the Contractor shall email a list of the attendees to the Contracting Officer. A Contractor may bring up to 10 people. The oral presentation will not be evaluated. Immediately prior to the oral presentation, the Contractor shall provide 20 hard copies and one electronic copy of the presentation materials to the PCO. If a VHS tape is provided, only one copy is required. *

* Changed by Amendment 0001.

** Changed by Amendment 0002.

**** Changed by Amendment 0004.

*** END OF NARRATIVE L 001 ***